

Guidance for Siting, Design, and Operations of Non- Hazardous Solid Waste Impoundments in Idaho



State of Idaho
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Table of Contents

| | | |
|-------|--|----|
| 1 | Introduction..... | 1 |
| 1.1 | Roles and Responsibilities..... | 2 |
| 1.1.1 | NSWI Owner/Operator Roles and Responsibilities | 2 |
| 1.1.2 | Local Government Roles and Responsibilities..... | 2 |
| 1.1.3 | Local Public Health District Roles and Responsibilities..... | 3 |
| 1.1.4 | DEQ Roles and Responsibilities..... | 3 |
| 2 | Idaho’s Tiered Solid Waste Facility Classification | 4 |
| 2.1 | Site Specific Classification..... | 5 |
| 2.2 | NSWIs, Multiple Impoundments, and MSWLFs | 5 |
| 2.3 | Pumpable Waste and its Relationship to Industrial Wastewater | 6 |
| 3 | NSWI Facility Siting | 6 |
| 3.1 | Floodplain Restriction | 8 |
| 3.2 | Endangered or Threatened Species Restriction..... | 8 |
| 3.3 | Surface Water Restrictions and Stormwater..... | 9 |
| 3.4 | Park, Scenic, or Natural Use Restriction | 9 |
| 3.5 | Wetlands | 10 |
| 3.6 | Ground Water | 10 |
| 3.7 | Geologic Restrictions | 11 |
| 3.8 | Property Line Restriction | 11 |
| 3.9 | Site Map..... | 11 |
| 3.10 | Local Government Permitting | 12 |
| 4 | NSWI Facility Design..... | 12 |
| 4.1 | Design Application Map Elements..... | 13 |
| 4.1.1 | Surface Water and Erosion Control System | 13 |
| 4.1.2 | Proposed Impoundments and Waste Management Areas | 14 |
| 4.1.3 | Location of any Non-waste Staging Areas | 14 |
| 4.1.4 | Design Topography after Facility Closure | 14 |
| 4.1.5 | Soil and Water Table Test Boring Holes, Wells, or Excavations..... | 14 |
| 4.1.6 | Proposed Expansion..... | 15 |
| 4.1.7 | Topography..... | 15 |
| 4.1.8 | Building and Construction Design Blueprints | 15 |
| 4.2 | Design and Construction Elements | 15 |
| 4.2.1 | Leak Detection System | 15 |
| 4.2.2 | Liner..... | 16 |
| 4.2.3 | Air Emission Control System | 16 |

| | | |
|--------|--|----|
| 4.2.4 | Odor Management | 16 |
| 4.2.5 | Ground Water Monitoring | 16 |
| 4.2.6 | Sludge Management | 17 |
| 4.2.7 | Storm Water Management | 17 |
| 4.3 | Design Submission and Review Process | 17 |
| 5 | Impoundment Facility Operations | 18 |
| 5.1 | Waste Acceptance at NSWI Facilities | 19 |
| 5.1.1 | Written Waste Acceptance Policies | 19 |
| 5.1.2 | Catalogue of Other Waste Acceptance Safeguards and Procedures | 20 |
| 5.1.3 | Waste Sampling Procedures | 23 |
| 5.2 | Common Waste Types and Categories | 26 |
| 5.2.1 | Grease Trap Waste | 26 |
| 5.2.2 | Wastewater from Industrial Production Processes | 26 |
| 5.2.3 | Wastes from Oil and Gas Exploration, Production and Operations | 26 |
| 5.2.4 | Pumpable Wastes from Sumps, Pits, Trenches, Traps or Similar Sources | 27 |
| 5.2.5 | Leachate from Waste Disposal Sites | 28 |
| 5.2.6 | Fuel Contaminated Wastewater | 28 |
| 5.2.7 | Concrete Hydro-demolition and Hydro-excavation Slurry | 28 |
| 5.2.8 | Ground Water Remediation Wastewater | 29 |
| 5.2.9 | Wastewater from Cleanups and Emergencies | 29 |
| 5.2.10 | Domestic Septage | 29 |
| 5.2.11 | VSQG Waste | 30 |
| 5.2.12 | Pumpable Waste Loads Containing Multiple Waste Types or Sources | 31 |
| 5.2.13 | Prohibited Waste | 31 |
| 5.2.14 | PFAS | 31 |
| 5.3 | Signs | 31 |
| 5.4 | Speculative Accumulation | 32 |
| 5.5 | Communications | 32 |
| 5.6 | Fire Prevention and Control | 32 |
| 5.7 | Facility Access | 33 |
| 5.8 | Odor and Nuisance Control | 33 |
| 5.9 | Sludge Management Plan | 33 |
| 5.10 | Bird Hazards to Aircraft | 34 |
| 5.11 | Stormwater Run-on and Run-off Control | 34 |
| 5.12 | Compatibility: Comingling, Mixing and Consolidating Wastes | 34 |
| 5.13 | Temporary Storage of Waste | 35 |
| 5.14 | Employee Training | 35 |
| 5.15 | Worker Safety | 35 |

| | | |
|------|---|----|
| 5.16 | Required Documentation..... | 35 |
| 6 | Closure of a Facility..... | 36 |
| 7 | Glossary | 36 |
| 8 | Links and Resources | 41 |
| 8.1 | Idaho Rules and Statutes | 41 |
| 8.2 | Idaho Guidance..... | 41 |
| 8.3 | Federal Rules and Statutes..... | 42 |
| 8.4 | Federal Guidance..... | 43 |
| 8.5 | Other Guidance and Resources | 44 |
| | Appendix A. Jurisdictional Maps of Health Districts, DEQ Regions, and Counties..... | 45 |
| | Appendix B. NSWI Facility – Example Pumpable Waste Profile Form..... | 46 |

Abbreviations, Acronyms, and Symbols

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|---------------|--|
| <u>AFFF</u> | <u>Aqueous Film-Forming Foam Concentrates</u> |
| <u>BMPs</u> | <u>Best Management Practices</u> |
| <u>BRC</u> | <u>Below Regulatory Concern</u> |
| <u>CESQG</u> | <u>Conditionally Exempt Small Quantity Generator</u> |
| <u>CFR</u> | <u>Code of Federal Regulations</u> |
| <u>DEQ</u> | <u>Idaho Department of Environmental Quality</u> |
| <u>EPA</u> | <u>US Environmental Protection Agency</u> |
| <u>ESA</u> | <u>Endangered Species Act</u> |
| <u>FEMA</u> | <u>Federal Emergency Management Agency</u> |
| <u>HELP</u> | <u>Hydrologic Evaluation of Landfill Performance</u> |
| <u>IDAPA</u> | <u>Idaho Administrative Procedures Act</u> |
| <u>IPDES</u> | <u>Idaho Pollutant Discharge Elimination System</u> |
| <u>ISWFA</u> | <u>Idaho Solid Waste Facilities Act</u> |
| <u>IWEM</u> | <u>Industrial Waste Management Evaluation Model</u> |
| <u>MOU</u> | <u>Memorandum of Understanding</u> |
| <u>MSWLF</u> | <u>Municipal Solid Waste Landfill</u> |
| <u>NSWI</u> | <u>Non-hazardous Solid Waste Impoundment Facility</u> |
| <u>NPDES</u> | <u>National Pollutant Discharge Elimination System</u> |
| <u>PER</u> | <u>Preliminary Engineering Report</u> |
| <u>PFAS</u> | <u>per- and polyfluoroalkyl substances</u> |
| <u>POTW</u> | <u>Publicly Owned (domestic wastewater) Treatment Works</u> |
| <u>QA/QC</u> | <u>Quality Assurance/Quality Control</u> |
| <u>RCRA</u> | <u>Resource Conservation and Recovery Act</u> |
| <u>TENORM</u> | <u>Technologically Enhanced Naturally Occurring Radioactive Material</u> |
| <u>USCA</u> | <u>United States Code Annotated</u> |
| <u>USDA</u> | <u>United State Department of Agriculture</u> |
| <u>USFW</u> | <u>United States Fish and Wildlife Service</u> |
| <u>VSQG</u> | <u>Very Small Quantity Generator</u> |

1 Introduction

This guidance is provided to assist with the siting, design and operation of ~~pumpable non-hazardous solid~~ waste impoundment facilities accepting pumpable waste. This guidance does not have the force and effect of law or rule. Rather, it is designed to serve as a primary reference tool on how to comply with applicable laws and rules.

Pumpable waste is defined in Idaho law as “[w]astes, including non-domestic septage, sludge, wastewater and non-municipal solid wastes, which are pumped from a holding area or container into a watertight tank truck or equivalent and transported for processing or disposal.” See IDAPA 58.01.06.005.32. All pumpable waste is industrial wastewater, as that term is defined in the Wastewater Rules, IDAPA 58.01.16.010.30, but only industrial wastewater that is pumped or mechanically removed for transport off site is pumpable waste. While the definition of pumpable waste does not include domestic septage, this guidance includes the topic because it is expected that facilities that wish to accept pumpable waste may also seek approval to accept domestic septage (see guidance [Section 5.2.9](#)).

Pumpable wastes that do not pass the “paint filter test” as set out in EPA Method 9095B ([see Section 8 of this guidance for associated web link](#)) may not be introduced to traditional municipal or non-municipal landfills because the liquid component of the waste is likely to add to leachate volume, which can increase the risk of ground water contamination. It can also increase methane gas production. Pumpable wastes have traditionally been taken to publicly owned treatment works (POTWs) for disposal. Pumpable wastes that meet a POTW’s acceptance criteria can still legally be disposed of in this manner. Generators and/or transporters of pumpable wastes should contact their local POTWs to determine if this option is available.

For purposes of this guidance, the term “impoundment” refers to any lined or unlined area of a facility where pumpable waste or sludge that does not pass the paint filter test is managed outside of a closed container, including any area where solidification occurs. A “waste management area” refers to areas where wastes that pass the paint filter test, such a bulked or solidified waste, are managed.

The relative simplicity and low operating costs of surface impoundments make them an attractive technology for the handling, storing, processing, treating through evaporation, equalizing, neutralizing, solidifying, and/or disposing of pumpable wastes. Unless a facility is designed for total evaporation, liquid reduction methods will be employed for continuous operations and acceptance of additional pumpable waste. The management and/or disposal of pumpable wastes in A properly located, constructed, maintained, and operated surface impoundment can be an effective and environmentally sound waste management practice and disposal strategy for pumpable waste.

The impoundment of pumpable waste considered to be solid waste by regulation, and not otherwise regulated under a discharge or land application permit, is regulated under the Solid Waste Management Rules, IDAPA 58.01.06 (the “Solid Waste Rules”). In this guidance the

Idaho Department of Environmental Quality (DEQ) refers to an impoundment facility regulated under the Solid Waste Rules as a “Non-hazardous Solid Waste Impoundment,” or “NSWI”. A NSWI is an impoundment facility receiving pumpable waste where: (1) the waste does not pass the paint filter test prior to placement in an impoundment, and (2) operations are not otherwise regulated under a discharge or land application permit.” NSWIs may be stand-alone, or may be co-located at an approved landfill or other permitted solid waste facility. Facilities engaged in food processing or other manufacturing or industrial activities that manage their liquid waste stream(s) onsite are not managing pumpable wastes as that term is defined, and are generally not regulated as NSWIs. Furthermore, these facilities are often regulated under a discharge permit or wastewater reuse permit (aka land application permit) and therefore excluded from regulation by DEQ’s Solid Waste Program.

The scope of this guidance does not include the construction or operation of facilities accepting municipal wastewater and industrial wastewater under a pre-treatment program, as those terms are defined in the Wastewater Rules, IDAPA 58.01.16, or facilities accepting hazardous waste other than Very Small Quantity Generator (VSQG) waste-, formerly known as Conditionally Exempt Small Quantity Generator (CESQG) waste.

1.1 Roles and Responsibilities

Facility owners/operators, local governments, local public health districts, and DEQ each have roles and responsibilities related to NSWIs. The following is a discussion on each group’s general role and responsibility. DEQ and local public health district jurisdictional maps can be found in Appendix A.

1.1.1 NSWI Owner/Operator Roles and Responsibilities

Under IDAPA 58.01.06, NSWI owners/operators are generally required to provide safe ~~liquid~~pumpable waste treatment, processing, and disposal at a facility sited, designed, operated, closed, and maintained after closure in accordance with the Solid Waste Rules and the facility’s site approval application, design ~~plan~~approval application, approved facility Operating Plan, and approved facility Closure/post-closure ~~plans~~Plan. It is the responsibility of the owner/operator to submit required documents to DEQ ~~and/or~~ the local public health district, or both, regarding the facility’s site approval, facility design, approval, facility Operating Plan, and facility Closure/post-closure Plan. If there is an expansion or change in site operations, the owner/operator may be required to submit revised documents for approval. For example, if a facility decides to accept waste not already covered in a site approval, the owner/operator ~~should~~is required by the Solid Waste Rules to provide revised documents for approval prior to accepting such waste.

1.1.2 Local Government Roles and Responsibilities

Within the state of Idaho it is the duty of the county commissioners of each county to acquire sites or facilities, and maintain and operate solid waste disposal systems. Idaho Code §31-4403. The counties may meet this obligation by owning ~~and/or~~ operating disposal systems themselves or by ensuring services are available through contracts, franchise agreements, or by other means.

Some counties elect to own ~~and~~/or operate NSWIs alongside a MSWLF so that bulk liquids and traditional solid waste can be managed at the same approved landfill site.

Counties and municipalities are also responsible for siting decisions relating to NSWIs arising out of their zoning and land use authorities. These authorities can extend into facility operations as well.

1.1.3 Local Public Health District Roles and Responsibilities

By Memorandum of Understanding ([2013 MOU](#)) with the seven local public health districts, DEQ has delegated the authority to review and approve Operating Plans to the districts for Tier II and Tier III facilities. The [2013 MOU](#) also provides the districts with authority over the review and approval of facility Closure/post-closure Plans, annual inspections, and co-authority over enforcement activities at all non-municipal solid waste facilities. ~~See~~ [A link to the 2013 MOU at can be found in Section 8: of this guidance.](#)

~~This guidance is written to reflect the current language in the 2013 MOU, but the 2013 MOU does not specifically address roles and responsibilities assigned to the local public health districts and DEQ for NSWI facilities. NSWI owners/operators should be aware of DEQ's more prominent role in the oversight of NSWIs as compared to other types of solid waste facilities since DEQ staff has more direct knowledge and expertise relating to pumpable waste management and disposal. A revised distribution of oversight responsibilities, as they relate to NSWI facilities, will be developed and made available on DEQ's solid waste website once they are established. In the interim, when this guidance references a review or approval performed by the local public health districts, DEQ may be performing that NSWI facility review or approval.~~

The local public health districts and DEQ work together in performing regulatory oversight of solid waste facilities, including reviewing and commenting on submittals provided by facilities. For example, the districts provide courtesy reviews and submit comments to DEQ on site approval applications and design ~~plans~~ [approval applications](#); DEQ incorporates or otherwise accounts for district comments in their response to the facility. Likewise, DEQ provides courtesy reviews and submits comments to the districts on Operating Plans and Closure/post-closure Plans; the districts incorporate or otherwise account for DEQ comments in their response to the facility. Specifically for Operating Plans, the local public health districts and DEQ will ensure that information provided in the Operating Plans, including but not limited to the types of waste accepted, are consistent with the approved site application and approved facility design.

~~While the preceding paragraph accurately outlines the respective roles and responsibility of the local public health districts and DEQ as set forth in the 2013 MOU, DEQ expects to play a more central role in the oversight of NSWIs as compared to other types of solid waste facilities since DEQ staff has more direct knowledge and expertise relating to liquid waste management and disposal.~~

1.1.4 DEQ Roles and Responsibilities

In very general terms, DEQ reviews and approves the siting and design aspects of non-municipal solid waste facilities in Idaho, and the districts oversee their operations and closure/post-closure care. This arrangement is described more fully in the MOU between DEQ and the districts. Still,

primary authority over solid waste facilities in Idaho, including NSWIs, remains with DEQ, and as stated above, DEQ expects to play a more central role in the oversight of NSWIs as compared to other types of solid waste facilities. This will include a more active role in the review and approval of Operating Plans, Closure/post-closure Plans, and plan modifications, as well as facility inspections.

2 Idaho's Tiered Solid Waste Facility Classification

By definition, solid waste incorporates a wide range of waste streams with varying characteristics. To address the many different characteristics, the Solid Waste Rules regulate solid waste facilities based on a tiered classification system. Each of the three facility tier classifications considers the volume and/or potential for harm to human health and the environment from the waste being managed. Facility owners/operators managing larger volumes of waste and/or waste types with a greater potential for harm to human health and the environment must demonstrate a higher level of protection when proposing site, design, operating, and closure features for a facility.

While IDAPA 58.01.06 provides a tier classification of “below regulatory concern” (BRC), this tier classification does not apply to facilities receiving pumpable waste. Tier I facilities may accept pumpable waste, but the cumulative volume of all waste at the site at any one time must be less than or equal to 200 cubic yards, or approximately 40,395 gallons. If an impoundment facility is proposing to meet the Tier 1 requirements please contact DEQ prior to construction to discuss whether the Tier I designation is appropriate.

Tier II facilities cannot accept VSQG hazardous waste, or materials with a high human pathogenic potential. They also cannot manage solid waste in a manner or volume that will form toxic leachate or gas, or manage solid waste in a manner or volume that is likely to pose a substantial risk to human health or the environment. Tier II facilities are required to obtain site and design approval from DEQ and Operating and Closure/post-closure Plan approvals from the local public health district (see Section 1.1.3- of this guidance for how this distribution of responsibilities may change). Requirements for Tier II facilities are contained in IDAPA 58.01.06.012.

Appropriately sited, designed, and operated Tier III facilities can accept VSQG hazardous waste as well as materials with a high human pathogenic potential. They can also manage waste that will form toxic leachate or gas, as well as those likely to pose a substantial risk to human health or the environment. IDAPA 58.01.06.009.04 authorizes DEQ to make that determination. The management of ~~bulk-liquid~~pumpable waste is generally considered by DEQ to pose a substantial risk to human health and the environment and, therefore, NSWIs are generally categorized as Tier III facilities.

Unless a facility obtains a variance from specific requirements, Tier III facilities are required to be designed and constructed with a liner, leachate collection system, air emission controls, and a ground water monitoring system. Requirements for Tier III facilities are contained in IDAPA 58.01.06.013. The leachate collection system requirement is ~~inapplicable~~not directly applicable to NSWI facilities since ~~at the~~ waste itself that is being managed is liquid. The air emission

control system requirement has limited applicability, similar to composting sites, but may apply depending on waste types managed, design features, and operational factors.

2.1 Site Specific Classification

A NSWI facility owner or operator may request to be regulated pursuant to the requirements of a lower classification by submitting information demonstrating a “Site Specific Classification” is appropriate. This procedure, and the information required to establish a site specific classification, may be found in IDAPA 58.01.06.009.06. In general terms, the liquid nature of the waste must be fully accounted for in the siting, design, and operation of the facility. In order to successfully establish that a lower tier designation is appropriate, an owner or operator should adequately address the following utilizing a combination of measures in the siting application, design of the facility, and the Operating Plan:

- The transport of potential contaminants through soils
- The prevention of soil and ground water contamination
- The detection of soil and ground water contamination
- The inherent difficulties in recognizing hazardous constituents in liquids/pumpable waste without costly analytical testing
- The concentration of contaminants within impoundments due to evaporation and settling

It will be necessary for applicants to present sufficient information to establish a site specific classification, including design and operational information, during the siting application process and prior to a siting decision by DEQ. The waste types and volumes that will be managed at the facility play a key role in evaluating a request for a site specific classification. Certain pumpable waste types and volumes may not be appropriate for a site specific Tier II classification.

2.2 NSWIs, Multiple Impoundments, and MSWLFs

Some NSWIs are co-located with other impoundments, other Tier I, Tier II, or Tier III solid waste operations, or municipal solid waste landfills. DEQ regulates Tier I, II, and III facilities under the Solid Waste Rules and municipal solid waste landfills under the Idaho Solid Waste Facilities Act (ISWFA). Both the ISWFA and the Solid Waste Rules require DEQ to review the appropriateness of the proposed site and a site approval, often referred to as a “site certification.” The appropriate Tier classification for a site is based on all solid waste operations occurring within the site certified area. For example, a NSWI with a 500,000 gallon impoundment of pumpable waste with minimal environmental or human health concern may be approved as a Tier II facility. However, a facility with fifteen 10,000,000 gallon impoundments handling the same type of waste may be considered a Tier III facility if, due to the total volume of waste being managed at the site, it is determined that the facility poses a substantial risk to human health or the environment.

When a site approval application for a new solid waste facility is being prepared for submission to DEQ, the applicant should take great care to foresee ~~and~~, account for, and provide information pertaining to all future, planned solid waste operations and waste types, ~~and have the site reviewed based on all future, planned operations and waste types~~. By doing so, your site will be

reviewed and approved at the appropriate, future tier classification, ensuring that all operations you eventually intend to carry out at the site can be accommodated.

When an existing facility seeks to expand, DEQ will review the site certification to identify what operations and waste types for which the site was certified ~~for~~. If the site certification does not account for the expansion operations or waste types, DEQ may request additional information or modeling from the applicant in order to supplement the site certification information on file; and to ensure that the site can accommodate the expansion. While the addition of more protective design ~~and/or~~ operational measures, or both, will qualify most sites for reasonable facility expansions, it is conceivable that in some cases, expansion plans may have to be curtailed to account for site limitations.

So long as a municipal solid waste landfill site was originally approved to accommodate for leachate management systems and the landfill has physical space for the addition of a NSWI operation within their site certified area, DEQ will not require a new site certification. However, DEQ will still require approval of all necessary design elements to adequately protect soils and ground water. In cases where a municipal landfill was approved without considerations for leachate or other liquid waste management, DEQ may request a comprehensive review of the site characteristics prior to approving the addition of a NSWI within the site certified area. Adding a NSWI outside a site certified area is considered either a lateral expansion or a separate NSWI facility requiring a new site certification.

2.3 Pumpable Waste and its Relationship to Industrial Wastewater

Idaho law does not distinguish pumpable waste from industrial wastewater. Rather than require facilities receiving pumpable waste to obtain design and construction approvals from multiple programs, DEQ has determined that these facilities need only to follow one application process under the Solid Waste Program. In order to achieve this, the Solid Waste Program application requirements applicable to NSWI facilities are designed to meet the submission and review standards for both solid waste and wastewater. A similar example is when a leachate pond is approved at a municipal solid waste landfill: the leachate pond is approved as part of the landfill design application process, but the pond approval process and technical design meets the industrial wastewater lagoon requirements in IDAPA 58.01.16.401, Wastewater Rules.

Facilities receiving pumpable waste must submit a NSWI “Site Approval Application” as well as a “Design Approval Application ~~under~~” in accordance with the Solid Waste Rules. While the terminology may differ, these submissions are similar to, and will also meet the “Plans and Specifications” submission requirement in IDAPA 58.01.16.401, Wastewater Rules. Wastewater professionals accustomed to submitting preliminary engineering reports (PERs) and plans and specifications will be accommodated during the NSWI application process.

3 NSWI Facility Siting

Siting a NSWI can be one of the more difficult tasks for owners/operators. In addition to State of Idaho requirements, local governments have planning and zoning requirements that may require a conditional use permit ~~and/or zoning requirements~~ for solid waste management sites. Early

discussions with all regulatory agencies can help reduce the time required to gain approval. Conducting a site tour with local and state agencies may help identify potential issues early in the approval process.

Neighbors may oppose a proposed NSWI for fear that the facility will reduce their property values or reduce the enjoyment of their property due to odors, dust, vehicle traffic, and vectors such as flies, birds, and rodents. Surrounding property owners may also be concerned that the NSWI will impact ground water used for drinking water. Many times, neighbor opposition can be addressed by informing them early in the process and holding meetings with neighbors to discuss the proposed facility.

The Tier III siting requirements contained in IDAPA 58.01.06, or their site-specific equivalent as determined by DEQ, are considered the minimum criteria to protect human health and the environment for NSWIs. Facility owners/operators need to consider these criteria when evaluating potential sites and developing the facility's design and Operating Plan. It is important to understand the site, design, operations, and closure are all integral to the protection of human health and the environment. Federal criteria for classification of solid waste disposal facilities and practices are set forth in 40 CFR 257.3. Solid waste facilities or practices violating criteria established in 40 CFR 257 are considered open dumps and may be subject to citizen lawsuits as provided for under federal law in the Solid Waste Disposal Act of 1965, 42 USCA §§6901 to 6992K.

Note that where a NSWI facility is co-located with a municipal solid waste landfill, certain siting requirements applicable to the landfill may differ from the siting requirements in the Solid Waste Rules. For example, the property line setback requirement applicable to MSWLFs is 200 feet while the setback requirement for Tier III facilities under the Solid Waste Rules is 100 feet. In instances where both sets of requirements can be met DEQ will request that facilities meet both requirements. In instances where there is a more stringent and a less stringent requirement, DEQ will expect facilities to meet the more stringent requirement. In instances where a facility cannot identify the more stringent requirement please consult with DEQ to determine the appropriate course of action.

The following sections summarize the siting criteria contained in IDAPA 58.01.06 that are applicable to Tier III NSWIs. Additional information is requested in the NSWI Site Approval Application that will facilitate the application review process and assist DEQ in providing early input on whether the applicant's proposal will meet the necessary requirements. The NSWI Site Approval Application resembles a combination solid waste facility siting application and a wastewater PER. Wastewater professionals familiar with the preparation and submission of PERs can be accommodated during the application process.

If a PER is not submitted, the following additional information relating to the planned facility and operations will be required to properly review a siting application:

- Identify impoundment liner type(s), along with storage capacity for initial and planned impoundments.
- Calculations establishing facility's operational design capacity that identifies a volume acceptance rate for each segregated waste stream are necessary to ensure the facility is

designed accordingly, the facility understands its waste volume limitations, and that all waste accepted at the facility is accounted.

- Wastewater concepts and terminology, as they may be applied to a NSWI, should be utilized including “Average Day Flow,” “Maximum Day Flow,” “Maximum Month Flow,” “Peak Instantaneous Flow,” or “Peak Hour Flow.” Refer to the Wastewater Rules for definitions not available in the Solid Waste Rules.
- Identify all planned methods of liquids reduction and each method’s reduction capacity, including all calculations or modelling that support the reduction. These may include surface evaporation, solidification, accelerated evaporation systems, or other methods.

As with all solid waste facility applications, DEQ offers applicants a pre-application conference to discuss approval procedures, application contents, timetables for application processing, and siting requirements. It is highly recommended that applicants be familiar with the Solid Waste Rules and engage with DEQ at least 6-12 months prior to the anticipated submission of a NSWI siting application. Anyone completing a site approval application should read the siting criteria contained in the Solid Waste Rules prior to completing the application. In addition to completing an application, all siting criteria will need supporting documentation to demonstrate compliance. If a facility intends to apply for a site-specific classification, it will be necessary to present design and operational information to DEQ prior to the siting determination. Applications are required~~The Solid Waste Rules require solid waste facility siting applications~~ to be ~~signed and stamped~~submitted by a “qualified professional ~~such as a~~,” meaning DEQ expects NSWI siting applications to be submitted and stamped by a professional engineer or professional geologist registered in the State of Idaho. Requirements for Tier III solid waste facilities are contained in IDAPA 58.01.06.13. The NSWIA site approval application is available on the DEQ Solid Waste Program ~~web page~~website.

3.1 Floodplain Restriction

Owners/operators may not locate solid waste facilities within a 100-year floodplain if the facility will restrict the flow of the 100-year flood, reduce the temporary water storage capacity of the floodplain, or result in a washout of the solid waste so as to pose a hazard to human health and the environment. Owners/operators proposing to locate a NSWI in a 100-year floodplain must ensure the site application specifically addresses how the facility will not restrict the 100-year flood, reduce temporary water storage capacity of the floodplain, or result in a washout of solid waste. All site approval applications must contain a Federal Emergency Management Agency (FEMA) map with the facility identified or a site evaluation report and a letter of conformation stamped by a registered professional engineer or registered professional geologist registered in the State of Idaho. See Section 8 of this guidance for a link to the FEMA Flood Map Service Center. Floodplain restrictions applicable to Tier III solid waste facilities are contained in 58.01.06.013.01.a.

3.2 Endangered or Threatened Species Restriction

To address potential impacts to endangered and ~~or~~ threatened species, owners/operators proposing to locate or laterally expand a NSWI must obtain a determination from the United

States Fish and Wildlife Service, the Idaho Office of Species Conservation, or the Idaho Department of Fish and Game. If a determination is made that the proposed site may impact endangered ~~and~~/or threatened species, the owner/operator may be required to conduct a survey of the proposed site to determine if endangered ~~and~~/or threatened species are on site or if the site contains critical habitat for the species. If the site contains endangered ~~and~~/or threatened species or critical habitat, the owner/operator may need to undertake steps to address impacts to those species. [See Section 8 of this guidance for associated web links and resources.](#) Endangered ~~and/or~~ threatened species restrictions applicable to Tier III solid waste facilities are contained in 58.01.06.013.01.b.

3.3 Surface Water Restrictions ~~and~~ Stormwater

Solid waste impoundment facilities can impact streams, rivers, lakes, and reservoirs if siting, design, operations, and closure are not adequately considered. Pumpable waste may be released from impoundments during storm events and system failures. Adequate stormwater controls and site grading can minimize overtopping and system failures and prevent pumpable waste from washing into surface waters.

To address impacts to surface waters, site applications of proposed facilities or lateral expansions need to include a scaled map(s) that indicates surface waters in the vicinity. Design plans must include stormwater control features and demonstrate those features are adequate to control a 24-hour, 25-year storm event at a minimum. While the 24-hour, 25-year storm event is the minimum design requirement, each facility's stormwater control system may be designed on site-specific meteorological conditions. The Operating Plan must discuss how the stormwater control features will be maintained to function as designed. This may include semiannual inspections of the stormwater control system and maintenance activities by facility staff as needed. [Records of stormwater inspections should be maintained as part of the facility operating record.](#)

Owners/operators may also contact EPA to determine if a National Pollutant Discharge Elimination System (NPDES) permit is required. [Note that beginning on July 1, 2021, DEQ will issue stormwater permits under EPA delegation. See Section 8 of this guidance for associated websites and resources.](#) Requirements for surface water restrictions in Tier III solid waste facilities are contained in IDAPA 58.01.06.013.01.c.

3.4 Park, Scenic, or Natural Use Restriction

To reduce potential impacts to visitors of national or state parks and scenic or natural use areas, the Solid Waste Rules require a 1,000-foot separation distance between the active portion of the facility and the boundary of any state or national park or land reserved or withdrawn for scenic or natural use, including, but not limited to, wild and scenic areas, national monuments, wilderness areas, historic sites, recreation areas, preserves, and scenic trails. Site approval applications for proposed facilities and lateral expansions must contain a scaled map depicting the facility and any park, scenic, or natural use area within a 1,000-foot radius of the proposed facility. Park, scenic, or natural use restrictions applicable to Tier III solid waste management facilities are contained in IDAPA 58.01.06.013.01.g.

3.5 Wetlands

Owners/operators need to ensure that their proposed facility or lateral expansion will not impact wetlands during facility construction and operation. For facilities sited within a wetland area, owners/operators may need to obtain permits from the US Army Corps of Engineers. Additional design requirements may apply to facilities located in wetland areas to address high water table and/or unstable areas. Documentation included with the site approval application should include a copy of the applicable National Wetlands Inventory map and letters from the US Army Corps of Engineers or the Natural Resources Conservation Service providing wetlands determination.

See Section 8 of this guidance for associated web links and resources. Requirements for wetlands restrictions in Tier III solid waste facilities are contained in IDAPA 58.01.06.013.13.a.

3.6 Ground Water

Ground water is a valuable resource for Idaho. Approximately 95% of Idaho citizens get their drinking water from ground water. In addition, agricultural irrigation accounts for 60% of the total ground water withdraw in Idaho. See DEQ's "Ground Water in Idaho" webpage [for more information, and see Section 8 of this guidance for helpful web links](#)). Protecting ground water should be a high priority for all Idahoans. Once waste is disposed in an unlined impoundment, it becomes very difficult to determine whether or when contaminants are impacting ground water. Areas across the state have relatively shallow ground water ~~and~~/or geology such as fractured basalt or sandy soil that may allow contaminants to migrate to ground water.

Idaho's Ground Water Quality Rule, IDAPA 58.01.11, defines three aquifer categories in Idaho; sensitive resource, general resource, and other resource. Sensitive resource aquifers receive the strongest level of protection. Stricter standards may apply to activities over a sensitive resource aquifer to ensure ground water is protected. Currently, the Spokane Valley-Rathdrum Prairie Aquifer is the only designated sensitive resource aquifer in Idaho.

NSWI facilities should be sited and designed to protect the first seasonal ground water encountered below the surface of the ground, or the upper-most water-bearing zone. A hydro-geologic investigation should be conducted to identify this depth, as well as any drinking water aquifers that underlay the site.

In light of the importance of ground water protection, NSWI owners/operators should carefully consider the characteristics of the waste types to be accepted. While a waste stream may be non-hazardous, constituents in the waste may, if improperly managed, impact ground water. EPA's "Guide for Industrial Waste Management" provides an in-depth analysis of the issues relating to non-hazardous industrial solid waste management, including management within surface impoundments. In addition, EPA provides the Industrial Waste Management Evaluation Model (IWEM). IWEM is a software program that assists non-hazardous industrial solid waste facility owners/operators in determining the most appropriate waste management unit design to minimize or avoid potential impacts. See Section 8 of this guidance for these and other resources and links.

Unless equally protective design and operational measures are put in place as part of a site-specific Tier II classification determination, pumpable waste is required to be managed in lined

impoundments. While impoundment liners are costly, remediating ground water impacted by liquid waste can be significantly more expensive, pumpable waste can be significantly more expensive. Software models such as Hydrologic Evaluation of Landfill Performance (HELP) Model, Unsat-H Model, and others can help determine the potential for impacts to ground water when modeling is performed by a qualified professional registered in the State of Idaho with experience using the particular model. Ground water restrictions applicable to Tier III solid waste management facilities are contained in IDAPA 58.01.06.013.01.d.

3.7 Geologic Restrictions

Fault areas, seismic impact zones, and other unstable natural or man-made features may impact the facility's site and design elements that are intended to protect human health and the environment. A site evaluation of a proposed facility or lateral expansion for these factors should be conducted by a qualified professional registered in the State of Idaho to determine if potential geologic issues exist with the site. Geologic restrictions applicable to Tier III solid waste management facilities are contained in IDAPA 58.01.06.013.01.e.

3.8 Property Line Restriction

The intent of the 100-foot setback from the active portion of the facility to the property line is to provide a physical separation from facility activities to surrounding neighbors. Even well-run facilities can produce some dust, odor, noise, and vectors. By providing this setback, the impact to neighbors can be reduced thereby reducing conflicts with surrounding property owners/users. Property line restrictions applicable to Tier III solid waste management facilities are contained in IDAPA 58.01.06.013.01.f. As noted previously in this guidance, municipal solid waste landfills have a 200-foot setback requirement. NSWIs co-located at a MSWLF should meet the more stringent 200-foot setback requirement since the NSWI is considered an active solid waste management unit.

3.9 Site Map

In addition to the site criteria identified above, a site approval application must include a scaled map(s) indicating the following:

- Highways, roads, and adjacent communities
- Property boundaries
- Total acreage of the site (indicate only the area to be used for waste management activities)
- Off-site and on-site access roads and service roads
- Type(s) of land use adjacent to the facility and a description of all facilities on the site
- All water courses, ponds, lakes, reservoirs, canals, irrigation systems, and existing water supplies within 0.25 miles of the proposed facility property lines. Existing water supplies include known public and private wells, springs, and surface water intakes used as public or private drinking water systems
- High-tension power line right-of-way, fuel transmission pipeline rights-of-way, and proposed and existing utilities

- Proposed and existing fencing
- Proposed and existing structures at the facility and within 500 feet of the facility boundary, including location of employee buildings and scales (if provided)
- Direction of prevailing winds

Site map requirements applicable to Tier III solid waste management facilities are contained in IDAPA 58.01.06.013.02.

3.10 Local Government Permitting

Owners/operators of a proposed NSWI should discuss their facility plans with county or city government early in the planning process to determine if separate local government approval is required. If the proposed facility site needs to be rezoned ~~and~~/or granted a special use permit, this may delay construction and operation. Local government approvals are separate from DEQ's approval process under the Solid Waste Rules. Approval by one entity does not obligate another entity to approve a project.

4 NSWI Facility Design

In addition to site selection, facility design provides human health and environmental protection from the liquid wastes and waste constituents that are managed at the facility. Design elements should consider both site conditions and the characteristics of the waste to be disposed at the facility. NSWI owners/operators are expected to design impoundments in accordance with professionally recognized industry standards and should utilize the "Ten State Standards," DEQ's Wastewater Rules, and DEQ's related guidance. EPA's "Principals of Design and Operation of Wastewater Treatment Pond Systems" may also be helpful as a primer. See Section 8 of this guidance for these and other resources and links. NSWI facility design is presented to DEQ in a Design Approval Application, sometimes referred to in this guidance as a design plan or plans.

NSWIs will be engaged in one or both of (1) the *treatment* of pumpable waste to reduce liquid content and collect the solids for proper disposal, and (2) the *processing* of pumpable waste into other, useable liquids or solids. Depending on the facility owner/operator's intent, such facilities may have facultative, stabilization, aerated, anaerobic, or total containment impoundments. The treatment trains may contain primary treatment units, secondary treatment units, and other, tertiary units. Much of the technology and nomenclature relating to these facilities will come from the wastewater industry and not the solid waste industry. DEQ expects NSWIs to design and describe engineered facilities using established wastewater industry standard treatment processes and utilize wastewater terminology in siting, design, and operational documentation.

Unlike operational activities, certain design elements such as a liners and leak detection systems are best installed prior to the placement of any liquid/pumpable waste. Liners and leak detection systems are an added cost but, in most cases, are required to minimize and identify waste infiltration to ground water. Ground water remediation and ~~or~~ closure of a facility can be much more costly than a liner, leak detection system, and ground water monitoring. Known design costs can be calculated into fees imposed on customers and spread over the life of the facility.

Unknown costs such as ground water remediation and closure are difficult to estimate. In the event of facility closure, money still must be spent on cleanup and closure/post-closure, yet no revenue is generated to offset these costs. Initial decisions on siting and design may also limit future changes in operation, such as expansion of the waste types accepted, if it is determined based on modeling or other methods, that the facility cannot accommodate the change and continue to protect human health and the environment.

Some operational information will be needed in order to properly evaluate facility design. Owners/operators of proposed NSWI facilities will need to submit information discussing the facility's operational design and capacity including a description of the waste types to be accepted and projected daily and annual waste acceptance volumes. Water balance calculations for each impoundment will be expected when evaporation is relied upon to reduce volume. Calculations establishing overall facility management capacity and volume acceptance capacity are necessary to ensure the facility is designed accordingly, the facility understands its waste volume limitations, and that all waste accepted at the facility is accounted for. More extensive operational information may be required at the time of site ~~and~~/or design review if applying for a site-specific Tier II classification.

Compatibility of the waste types to be accepted, and management of incompatible wastes, should be analyzed by a qualified professional, and that analysis should be provided to DEQ. A compatibility analysis should address the creation of hazardous materials or conditions, the creation of nuisance conditions such as odor, the ability of waste mixtures to be processes or treated as intended, and the effect of materials on the condition of the liner and other impoundment or waste management systems.

Wastewater professionals familiar with the preparation and submission of plans and specifications under the Wastewater Rules can be accommodated during the application process. At the pre-application meeting DEQ can discuss how the Design Approval Application relates to plans and specifications.

The Solid Waste Rules require owners/operators to submit facility design changes to DEQ for approval in advance. This includes structure modifications, physical changes to impoundments, changes to stormwater controls, and any other physical modification to the facility. Owners/operators are encouraged to contact DEQ if there is any question of whether a design modification application is required. Tier III solid waste management facility design requirements are contained in IDAPA 58.01.06.013.c and d, and are further identified and described in the following sections. The NSWI Design Approval Application is available on the DEQ Solid Waste Program website.

4.1 Design Application Map Elements

Design applications for proposed Tier III NSWI facilities or lateral expansions will need to include a map containing the following information.

4.1.1 Surface Water and Erosion Control System

The map will need to identify both stormwater run-on and stormwater run-off control systems including any ditches, berms, check dams, ponds, and other measures/features used for

stormwater control. Stormwater control systems should also include calculations demonstrating the system will manage, at a minimum, the 24-hour, 25-year storm event.

Temporary control measures should also be included in the design plan. Exact locations of temporary control measures would not be needed, but discussions on when the control measures will be used and the purpose of each temporary control measure should be included.

Any time stormwater control design changes are anticipated, updated design plans must be submitted to DEQ for review and approval prior to implementing the design changes. Updated facility maps must also be included with the Operating Plan.

4.1.2 Proposed Impoundments and Waste Management Areas

Identify all proposed short- and long-term waste management areas and impoundments, including but not limited to areas where pumpable wastes will be initially received, evaluated, stored, and ~~or~~ processed, any waste separation, solidification or bulking areas, and any sludge storage areas. All proposed impoundments and waste management areas to be developed on the proposed site must be identified on a map. Information on proposed impoundments and waste management areas should include the specific type(s) of waste to be managed in each area or impoundment, as well as dimensions for each area or impoundment.

4.1.3 Location of any Non-waste Staging Areas

Staging areas for any bulking materials and raw products should be identified. The bulking materials to be used should be identified, along with associated stormwater control systems.

4.1.4 Design Topography after Facility Closure

The owner/operator will include the elevations expected after facility closure; ~~or~~ a narrative description of the facility's topography after facility closure. Closure design should consider surrounding topography and future land use of the property.

A Closure/post-closure Plan must be submitted to the local public health district prior to closure/post-closure activities. Owners/operators should become familiar with the specific closure/post-closure requirements in the Solid Waste Rules. Closure/post-closure is addressed in Section 6 of this guidance and will be addressed in more detail in a separate future DEQ guidance document.

4.1.5 Soil and Water Table Test Boring Holes, Wells, or Excavations

New and lateral expansion facility owners/operators must conduct site/geotechnical investigations to determine the underlying geology and depth to the highest known ground water table. These investigations can be completed using a variety of equipment that provides reliable information on the site characteristics.

Locations of any subsurface investigations should be carefully documented and provided on a map. Investigations should concentrate in the area where the impoundment(s) are located. Site conditions such as soil type and depth to bedrock and ~~or~~ ground water can vary across a site.

Owners/operators of new NSWI facilities ~~will~~may need to complete a site investigation as part of the site approval process. Owners/operators may use existing data if the data represents geology and ground water under the area proposed for lateral expansion. If current data does not represent conditions under the area of the lateral expansion, additional investigation will need to be completed prior to lateral expansion approval.

4.1.6 Proposed Expansion

In addition to the location of impoundments and waste management areas proposed for active use, the map(s) must include information on how future impoundments and waste management areas will be laid out and how the owner/operator plans to develop each additional unit.

4.1.7 Topography

Map(s) should include contour lines at 5-foot intervals within the operating area and 10-foot intervals to the facility boundary.

4.1.8 Building and Construction Design Blueprints

NSWI facility owners/operators will need to include design plans/blueprints for all proposed structures and buildings at the facility that relate to the management of pumpable waste. After construction an owner/operator is required to submit an accurate set of record or “as-built” plans, or an equivalent statement stating that design plans accurately depict the constructed facility. This submission also meets the record plans submission requirement in the Wastewater Rules.

4.2 Design and Construction Elements

NSWI facility owners/operators are expected to install some or all of the following systems and elements. Owners/operators must demonstrate that the proposed systems will be constructed, monitored, and maintained in accordance with any manufacturer recommendations and that the systems provide adequate protection to human health and the environment. Requirements for the design and construction elements for Tier III solid waste management facilities are contained in IDAPA 58.01.06.013.13.c.

4.2.1 Leak Detection System

In classifying solid waste management facilities, IDAPA 58.01.06.009.04 lists “leachate collection system” as a required aspect of a Tier III facility. However, DEQ has determined that the leachate collection system requirement, as it pertains to NSWI facilities, is satisfied by installing, monitoring, and maintaining a leak detection system, since the primary waste at a NSWI facility is in liquid form and in an impoundment. ~~A~~ Leak detection ~~systems~~systems may include a double-liner design, lysimeters, or underdrain systems, ~~or~~. The requirement may be satisfied in some cases through additional operating criteria such as regular liner inspections and seepage testing. Most NSWI facilities utilize a combination of leak detection design and operational measures to ensure impoundment performance.

4.2.2 Liner

NSWIs are expected to install a liner (IDAPA 58.01.06.009.04). Liner design plans must prevent ground or surface water contamination and account for the types of wastes handled. Liner designs are to be provided to DEQ for approval, and submissions should include information on the type of liner to be installed, liner compatibility with the proposed waste(s) to be managed, quality assurance/quality control (QA/QC) practices to ensure the liner is installed to maintain liner integrity, and a demonstration that the liner will prevent downward migration of ~~liquid~~ waste constituents and/or gas to the first seasonal ground water encountered below the ground surface, or upper most water-bearing zone.

The facility Operating Plan should include a procedure to gauge liner integrity at regular intervals, as well as after sludge removal and other activities that may damage the liner.

4.2.3 Air Emission Control System

The Solid Waste Rules require Tier III solid waste facilities to install air emission control systems (IDAPA 58.01.06.009.04). This requirement may have limited applicability at some NSWI facilities, depending on waste types managed, design features, and operational factors. A narrative explanation of why this requirement is inapplicable can be included in a facility's design plan for DEQ review. When this requirement is applicable, facilities must provide air emission control system design plans to DEQ. The design plans should indicate the location of monitoring devices based on site-specific conditions and ensure that air emissions will not exceed 25% of the lower explosive limit for gases in facility structures and not exceed the lower explosive limit at the property boundary.

4.2.4 Odor Management

All owners/operators of proposed NSWI facilities will be expected to submit an Odor Management Plan, ~~and operational aspects of odor management should be included in as part of~~ the facility Operating Plan. Odor management may include both design elements and operational measures, and design elements should be identified in the design approval application. For more information see [Section 5.8](#). Odor prevention, detection, and response should be addressed of this guidance.

4.2.5 Ground Water Monitoring

Installing a ground water monitoring system including a sufficient number of up-gradient and downgradient wells provides an early warning system should ~~liquid~~-waste constituents reach ground water passing under a facility. Owners/operators who install ground water monitoring systems also demonstrate to neighbors that the facility understands the importance of ground water and provides a level of confidence to downgradient users that ground water is not impacted.

Tier III solid waste facilities are required to install ground water monitoring systems and must submit design plans identifying the location of proposed wells at the point of compliance, soil types at the site, depth to ground water, and ground water flow direction. If an applicant is requesting a site specific classification as a Tier II facility, other design and operational measures will be required to be put in place that will be equally protective. Depending on site-specific and

other factors, a combination of liner, leak detection systems, and/or seepage testing may be determined to be equally protective.

If ground water monitoring is required, the owner/operator shall submit a copy of the geologic log and record of well construction to DEQ for each well within 30 days of well completion. A Ground Water Monitoring Plan must also be submitted and approved by DEQ indicating monitoring frequency (quarterly unless otherwise approved by DEQ), constituents to be monitored, and QA/QC sampling procedures. The ~~operational aspects of the~~ Ground Water Monitoring Plan should be integrated into the facility Operating Plan.

4.2.6 Sludge Management

Most NSWI facilities are expected to generate sludge and facility design should accommodate for all sludge management activities that will be required, including any sludge drying facilities, solidification operations, and storage. Design/site plans should include the location of all sludge management areas. ~~A Sludge Management Plan should be submitted during design review, and the facility's operating plan should incorporate operational aspects of the~~

A Sludge Management Plan, including sampling protocols, storage timeframes, and disposal methods and/or locations, should be included in the facility Operating Plan. The requirements in IDAPA 58.01.16.650 may apply to the sludge generated at NSWIs and facility design should accommodate these requirements. See Section 5.9 of this guidance for more information.

4.2.7 Storm Water Management

A site-wide Storm Water Management Plan should be prepared and submitted during the design review process. Stormwater structures and physical elements will also be depicted in the facility design map and in the plans and specifications, if applicable. Note that the facility may also be required to obtain an NPDES/IPDES storm water permit. ~~The operational elements of a~~ The Storm Water Management Plan should be incorporated into the facility Operating Plan.

4.3 Design Submission and Review Process

Because pumpable waste is also considered to be non-municipal or “industrial” wastewater under the Wastewater Rules, DEQ expects design application submissions by NSWI owners/operators to meet the substantive requirements of the Wastewater Rules, IDAPA 58.01.16.401, as well as the Solid Waste Rules. As with all solid waste facility applications, DEQ offers applicants a pre-application conference to discuss approval procedures, application contents, timetables for application processing, and design requirements.

It is highly recommended that applicants engage with DEQ at least 6-12 months prior to the anticipated submission of a NSWI design application. The design approval application for NSWI facilities should be prepared by or under the supervision of an Idaho licensed professional engineer and shall bear the imprint of the engineer's seal. Once submitted, the application review timeframes and procedures in the Solid Waste Rules apply, ~~including the public notice requirement in IDAPA 58.01.06.032.03.b.~~

Construction may begin once design approval from DEQ has been received. Construction should be observed by ~~an Idaho~~ licensed professional engineer or by someone under a licensed engineer's supervision.

Record or "as-built" plans must be submitted under a licensed engineer's seal as set out in IDAPA 58.01.16.401.04. Changes to facility design require updates to the facility's record plans. For instance, this includes any change to the location of waste handling areas, sludge management areas, and bulking material storage areas. The facility record needs to reflect all these design and operational changes so that, in the event of a release, remediation activities can be effectively employed. This is important during the operational life of the facility as well as during and after facility closure.

5 Impoundment Facility Operations

The daily operation of a NSWI facility has a significant effect on whether the facility is protecting human health and the environment. A poorly operated facility can negate the effort that went into properly siting and designing it.

Owners/operators of NSWI facilities are required to develop an Operating Plan, ~~which is reviewed and approved by the local public health district~~ and submit it for approval. See the glossary for discussion of the term "Operating Plan." Once approved, Idaho regulations require NSWI owners/operators to have the approved Operating Plan on site, and the ~~health districts expect the~~ facility ~~to~~ must be operated in accordance with the plan. Facilities should seek health district approval to update their Operating Plan prior to making any operational changes. An Operating Plan serves several purposes, but its primary usefulness is as a reference guide or facility manual for staff. New employees can become familiar with nearly all aspects of the facility by reviewing a well prepared and up-to-date Operating Plan. The plan can also be used by staff when unusual or emergency situations arise or if unfamiliar waste types are encountered. While an Operating Plan cannot be written to address every possible situation, it should be written so that most foreseeable situations are addressed. In the event that a situation arises that is not specifically covered in the Operating Plan, the plan should include the contact information for a senior decision-maker that staff can contact.

The following is a discussion of solid waste facility operating requirements detailed in IDAPA 58.01.06.013. Note that municipal solid waste landfills regulated under the ISWFA are expected to integrate their NSWI operations into their overall facility Operating Plan. Other required plans, such as an Odor Management Plan or a Sludge Management Plan, can be incorporated by reference into a facility's Operating Plan as separate sections or chapters, which avoids the need for duplication of the operational aspects of these plans in the facility Operating Plan.

As noted above, a revised Operating Plan is required to be provided to the local public health district for review and approval whenever there are changes to facility operations, including but not limited to changes to the waste types accepted at the facility, a change in the types of wastes mixed or consolidated, changes in waste monitoring and measurement, changes to waste placement, changes to where waste is taken or stored during periods when the impoundment(s) are inaccessible, and changes to the maintenance or operation of leak detection and other

environmental monitoring and control systems. Some changes will also require submission of a design modification application to the DEQ.

5.1 Waste Acceptance at NSWI Facilities

NSWI facilities can be authorized to accept a broad range of ~~liquid~~liquid pumpable waste types so long as the facility is sited and designed appropriately, and their Operating Plan authorizes the acceptance of those waste types. All waste types that will be managed at the facility need to be adequately identified in the facility Operating Plan. The most important type of waste that cannot be accepted at NSWI facilities is regulated non-VSQG hazardous waste. This includes EPA listed waste as well as characteristic hazardous wastes which are ignitable, corrosive, reactive, or toxic. For general information on conducting hazardous waste determinations please see DEQ's fact sheet entitled "Hazardous Waste Determinations" on the DEQ Hazardous Waste Program's website.

One of the major regulatory challenges for solid waste facilities that manage bulk liquids is to design and implement a procedure to reliably detect and prevent acceptance of regulated hazardous waste. Only permitted hazardous waste Treatment, Storage and Disposal (TSD) facilities are authorized to accept hazardous waste. See Idaho Code §39-4408. It is important to understand that acceptance of hazardous waste at a facility not permitted as a TSD is illegal regardless of what the generator's accompanying paperwork says. That is why a NSWI facility's acceptance procedure is so important. Acceptance of hazardous waste without a TSD permit, even inadvertently, would potentially subject a facility to significant enforcement penalties and clean-up costs. *Knowingly* accepting hazardous waste can subject a facility to criminal penalties and large fines. See Idaho Code §39-4415. While it is the waste generator's obligation under the law to properly characterize their waste as hazardous or non-hazardous, it is the obligation of the NSWI facility's owners/operators to avoid accepting hazardous waste – to avoid becoming an illegal TSD facility.

The facility Operating Plan is expected to describe the waste acceptance process, how the facility will address waste compatibility, if applicable, and where within the facility each waste type will be transported and managed after acceptance.

5.1.1 Written Waste Acceptance Policies

Owners/operators of NSWI facilities are expected to develop waste acceptance policies for the waste types that they accept. Written waste acceptance policies provide an effective means to communicate facility expectations and requirements to customers, provide assurance to regulators that the facility is properly overseeing what materials are entering their facility, and, finally, robust waste acceptance policies reduce risk and potential liability for the facility itself. These policies should be made available to customers and should inform them of (1) the required waste content parameters and (2) the information that is required to accompany each type of waste. Waste acceptance policies may be for individual types of waste or for broad categories of waste. DEQ encourages facilities to develop and implement waste acceptance policies that require submission of analytical test results for some or all loads of certain waste types, including but not limited to:

- **Any waste where the generator does not have control over, or full knowledge of, its content.** An example is waste from a 24-hour, unstaffed car wash sump. There is little or no oversight of the entry of wastewater and other materials to these sumps. As a result, the generator does not have the requisite knowledge of its content to provide reliable information without obtaining analytical test results.
- **Any waste that was generated from an unknown process or location.** NSWI facility owners/operators need to be made aware of the source of the waste and the process that generated it. Without this information facilities have no means by which to measure the accuracy of the generator's statements relating to the content of their waste. Information verification reduces risk and potential facility liability, and it also provides regulators with assurances that the facility is only accepting materials it was sited and designed to manage.

Managing pumpable waste involves many inherent risks. When a generator does not provide, and a facility does not require, analytical test results in the circumstances described above, the facility is taking on an even greater risk, and an avoidable one, that the material contains unknown and possibly hazardous or incompatible constituents. Robust, well designed waste acceptance policies can be developed for each type of waste accepted at a facility, or for categories of waste. In either case, it is recommended that they be prepared with the assistance of a technical professional familiar with waste compatibility issues and the waste or industrial processes involved. These waste acceptance policies become an integral part of the facility's Operating Plan.

When NSWI owners/operators or their technical consultants develop a waste acceptance policy, one of the threshold questions is whether the facility should accept that particular type of waste (1) without any analytical data, (2) with analytical data on an initial load and some number of subsequent loads on a scheduled basis, or (3) with analytical data on each load. Many factors will need to be accounted for in making these policy decisions, including the design of the facility, the training and experience of waste screening employees, and other facility-wide policies that may be in place like frequent sample collection and random confirmation testing. For example, a Tier III facility with state-of-the-art liners, leak detections systems and ground water monitoring may choose to collect samples of every incoming load of waste, store them for 6 months, and publicize that it randomly tests 3% of accepted loads to confirm their content.

All waste acceptance policies should require customers to update waste/process paperwork when any changes occur to the process that generates the waste. For example a longstanding customer with a truck washing operation that only washes on-road dairy vehicles delivers wash area sump waste to a NSWI under a waste acceptance policy that does not require submission of analytical test results. If that washing operation begins to wash vehicles used to clean up and carry solvent spill material, the waste acceptance policy should require the customer to update their waste/process paperwork so that the determination to accept the waste without analytical data may be revisited.

5.1.2 Catalogue of Other Waste Acceptance Safeguards and Procedures

All solid waste facilities are expected to fully address waste acceptance criteria, policies, and procedures in the facility Operating Plan. Facilities must demonstrate that (1) the facility has a

program in place to identify and exclude hazardous waste, and (2) the facility is only accepting waste types that it was sited and designed to manage. A facility's most effective safeguard is to require customers to follow well developed waste acceptance policies. Some additional management practices and safeguards also play an important role. These include the following:

- **Training:** No policy or paperwork can be successful without alert and properly trained staff. Staff can identify problems and incomplete, suspect and even fraudulent paperwork. All staff involved in the acceptance of waste should be adequately trained to implement waste acceptance procedures, identify the waste types that the facility Operating Plan allows the facility to accept, monitor for waste types that are hazardous and cannot be accepted, and request more information when a waste is presented at the facility that requires more information before it can be accepted. Training of facility staff is a facility's best defense against inadvertent acceptance of hazardous waste and the consequences that follow. A thorough and regularly scheduled training protocol should be set out in the facility Operating Plan, and training should consist of industry-standard off-site courses and certifications when available.
- **Waste Profile:** NSWI facility owners/operators or their technical consultants may develop a "waste profile" for each waste from each customer, including separate profiles for different sites generating the same waste, if appropriate. The waste profile should include the generator's waste characterization as well as information about the process that generated the waste, the location of generation, information about the generator, and any other information required to determine waste compatibility. The full waste profile can be kept on-site to pre-qualify the acceptance of certain types of waste under specified conditions. Waste profiles should be updated on a regular basis as well as when any of the information on the profile changes. An example pumpable waste profile form is attached in Appendix B.
- **Waste Rejection or Segregation:** The waste profile or other required paperwork accompanying each waste shipment should adequately identify the waste type and properly characterize the waste as non-hazardous. Trained staff should scrutinize the paperwork to identify incomplete and inconsistent information. Facilities are encouraged to identify and differentiate high-risk waste types, and subject those to closer scrutiny. This heightened scrutiny can be integrated into a more stringent waste acceptance policy. Wastes not meeting the applicable waste acceptance policy should be rejected or segregated from other wastes until confirmation sampling results are obtained. Confirmation sampling is discussed in more detail in the next section. Operating Plans must discuss monitoring and handling procedures for unauthorized waste. Facilities may be designed with holding areas in order to properly segregate waste while waiting for sampling results.
- **Screening and Logging Incoming Waste:** Gate attendants should conduct a visual inspection of every load that enters the facility and scrutinize the waste profile or other paperwork accompanying every load. Measuring incoming loads either by weight or volume can assist with facility planning. Monitoring incoming waste and recording this information on a daily log can assist with future waste acceptance decisions, assess remaining capacity, and determine future design capacity needs. A record of all rejected

loads should be maintained in the facility record that documents the contents of the load, the reason the waste was rejected, driver's name, vehicle license number, and any other pertinent information. Identify problem customers and impose additional requirements, or prohibit their access to the site. Report fraudulent behavior to DEQ.

- Random Load Inspections:** All loads should be subject to random load inspections. For ~~liquid~~pumpable wastes managed at NSWIs, facilities should consider collecting samples from every load for all waste types other than those deemed low-risk. A percentage of these samples, along with samples from high-risk waste types and suspect wastes, should be subjected to confirmation testing. Ensure that all samples collected for future analysis are identified, tracked, and stored in conformance with established QA/QC standards. Confirmation testing and sampling is discussed in more detail in ~~the next~~ section 5.1.3.3 of this guidance. Sampling every load and randomly subjecting loads to confirmation testing tells customers that they may be caught if they misrepresent the delivered waste, even if they are not caught immediately.
- Contract Liability:** It is good practice to hold the haulers and generators contractually responsible for wastes delivered to the facility and to ensure that the waste is not hazardous. Holding both hauler and generator jointly liable for any hazardous wastes that are discovered after acceptance, and for any costs borne by the facility in managing and removing that hazardous waste, can reduce owner/operator exposure to the inherent risks associated with managing ~~liquid~~pumpable waste. Note however that a facility owner/operator may not eliminate legal responsibility for cleanup ~~and~~/or penalties through contractual arrangements.
- Licensed Haulers:** The various health districts issue licenses to haulers of domestic septage. A facility may choose to accept waste only from these licensed haulers, regardless of the waste type being hauled.
- Customer Education Materials:** Customers who are not typically considered to be industrial manufacturers or processors may have limited knowledge of their responsibilities under RCRA to properly characterize their waste, or the methods that may be required. Both transporters and facilities play an important role in educating these customers. DEQ can partner with facilities in the development and dissemination of educational materials to assist specific sectors of the public.
- pH Testing:** The acceptable pH range is between 2.0 and 12.5. Waste with a pH range outside of these parameters is considered hazardous waste and cannot be accepted at a NSWI. Some POTWs have required pH testing of all incoming pumpable wastes, both as a hazardous waste screening measure and as a limited confirmation that the waste is what the generator presents it to be for compatibility purposes. The results of a pH test can give the facility a general sense that the waste is what the transporter or generator claims it to be, but it cannot identify the waste content.

Over time, the consistent application of the practices listed above will help in managing the facility, reduce liability, protect facility workers, and maintain the environmental integrity of the site.

5.1.3 Waste Sampling Procedures

A generator's evaluation of whether a waste is hazardous, a transporter's decision on whether to accept a load for transport, and a NSWI owner/operator's decision to accept and manage a load of pumpable waste may be based on incorrect information if sampling is not performed properly. Proper techniques, as found in 40 CFR Part 136, must be used for sample collection, preservation, storage, and analysis if reliable results are expected to be obtained.

Owners/operators of NSWI facilities may use the information in this section when designing their own protocol for sample collection, storage, and testing. Facilities may also utilize the information in this section to educate transporters and customers on how to design their own protocols. DEQ has produced a "Pile Sampling White Paper" that is available on its website. This document may be useful for preparing a plan to sample sludge or sediment removed from an impoundment. A link to the document is available in Section 8 of this guidance. In-place sampling of impoundment sediments and liquids may require a plan that addresses any waste settling or separation that has occurred.

There are two basic types of samples: grab samples and composite samples. ~~For sampling pumpable waste, both grab and composite~~ Both types of samples are collected manually. The decision to utilize grab or composite sampling depends on several key factors including:

- Composition of the waste that is being received
- Pollutants to be analyzed
- Physical setup of the receiving station
- Purpose of the sample
- How well mixed the load is

5.1.3.1 Grab Sampling

A grab sample is a single discrete sample collected over a short period of time without regard to the waste stream flow. Grab samples are useful in taking a "snapshot" of a discharge and can provide information on the extreme pollutant concentrations of a load, whereas composite sampling may mask the extreme pollutant levels. Grab samples may be used if both flow and pollutant concentrations or loadings are constant and should only be employed if the waste contained in a pumper's truck is homogeneous. Grab sampling is used when collecting composite samples is not appropriate. For example, grab sampling is necessary for such parameters as pH, oil and grease, temperature, total phenol, cyanide, sulfides, and volatile organics.

5.1.3.2 Composite Sampling

~~Composite samples measure the average amount of pollutants discharged by a waste hauler during the entire discharge period.~~ A composite sample is a mixed or combined sample that is formed by combining a series of individual and discrete grab samples collected over a period of time or representing more than one specific location or depth. Composite samples measure the average amount of pollutants discharged by a waste hauler during the entire discharge period. Composite sampling of pumpable waste consists of collecting time-proportional samples at specified intervals during a discharge. For a non-homogeneous discharge, wastes are stratified in the hauler's tank and the effluent quality will vary over the discharge period. For this situation, the composite sample collected over the discharge period would be most appropriate. Grab (discrete) samples should be taken at least three times during the discharge and then composited: once at the onset of the discharge, where a higher concentration of solids are likely to occur,

once in the middle of the discharge, and once at the end of the discharge where light oils are most likely to appear.

5.1.3.3 Sampling Frequency

DEQ recommends that every NSWI include some form of confirmation sampling in their suite of waste acceptance safeguards, and establishing frequency is an important aspect of any confirmation sampling program. In addition, each waste acceptance policy may set out the required frequency of sampling and analysis required of the customer. NSWI owners/operators should consider a number of issues when establishing a customer's required sampling frequency, including:

- Frequency necessary to obtain data representative of the nature and volume of the hauled waste
- Frequency necessary to deter unscrupulous haulers from delivering and discharging incompatible wastes
- Actual (or potential) impact of the hauled waste on the operation of the NSWI, compatibility with other wastes, and sludge disposal practices
- The hauled waste source and the types and concentrations of pollutants contained in the waste
- Regulatory requirements of any permits, local ordinances, facility policies, and federal regulations
- Seasonal variations in the volume and makeup of hauled waste
- Trends in delivery times
- Compliance history of the waste hauler

NSWI owners/operators should establish a base sampling frequency for each waste type or each category of waste, and increase or decrease the frequency on a case-by-case basis using the factors discussed above. A base sampling program for pumpable waste may include:

- Visual observation and recording of any unusual odors, color, or other characteristics
- Monitoring of pH
- Collection of a grab or composite sample of the hauled waste (for later analysis if necessary)

While an effective deterrent, sampling alone collecting samples may not provide complete protection from incompatible loads, as it can provide information only if analyzed. NSWI owners/operators may find the need to perform a quick analysis of a load before discharging to the impoundment system for any number of pre-determined or suspect parameters. Analyzing for pH is perhaps the most effective way to discover incompatible loads, and can be performed rapidly, without great cost to the NSWI or the waste hauler. However, as previously noted, the results of a pH test can only give the facility a general sense that the waste is what the transporter or generator claims it to be. It cannot identify the waste content.

Two sampling programs are described below that categorize accepted wastes very broadly - domestic septage and everything else. These examples are offered for their simplicity and not as a suggested way to categorize waste:

Example 1: Comprehensive sampling and analysis of all non-domestic hauled waste and periodic sampling and analysis of domestic septage—All hauled wastes of nondomestic origin are sampled and analyzed and every tenth load of domestic septage received from each hauler is sampled and analyzed.

Example 2: Comprehensive sampling of all hauled wastes and periodic or random analysis of the collected samples—A sample is collected from each hauled waste load. These samples are preserved and stored in accordance with established standards and a portion of the samples are analyzed. Each hauler knows that all of his loads will be sampled but does not know which of his loads will be analyzed prior to expiration of their holding time. In addition, if a disruption in facility operations occurs, the stored samples can be used to determine the exact makeup of the load which caused (or is suspected of causing) the disruption. If several loads were received, the stored samples of all these loads can be analyzed to assist in identifying the waste hauler and waste load that may have caused the disruption.

Example 3: Random sampling and analysis—Sample collection and analysis are conducted on a random basis. For example, the NSWI randomly selects a day to conduct sampling and all waste loads that are received that day are sampled and analyzed, or the NSWI may collect and analyze samples every day but randomly selects the loads to be sampled and analyzed (i.e., every fifth truck or seven random samples per day).

5.1.3.4 Testing Parameters

The purpose of generator-required waste characterization in RCRA is limited to determining whether the waste is hazardous. However, depending on how wastes are managed at the facility, additional analysis to determine compatibility with other wastes may be necessary. Whether a customer or NSWI facility staff performs the analytical testing for a particular waste type, DEQ suggests that the initial waste characterization take place over a series of waste loads, or if there are seasonal variations to the waste, over a period of several months to more than a year. Pollutants of concern identified during characterization should be used to establish the parameters for a routine monitoring program, as discussed above.

A customer's routine monitoring data, if available, may be useful to identify potential waste constituents. Metals typically identified at *highest* average levels in pumpable waste may include iron, zinc, copper, lead, chromium, and manganese. The most *frequently* identified metals may be copper, nickel, chromium, and lead. Organics likely identified at highest average levels may be acetone, isopropyl alcohol, methyl alcohol, and methyl ethyl ketone. In general, owners/operators of NSWIs should anticipate that pumpable waste may contain relatively high levels of heavy metals and organic solvents. However, the type and level of pollutant present will vary depending on the type of waste (e.g., domestic septage, landfill leachate, ground water remediation site waste, industrial wastes) and site-specific factors. NSWI staff should periodically sample loads of certain waste types to determine if there are site specific pollutant concentrations and loadings for those metals listed above, as well as for common organic solvents (especially ketones and alcohols) and any other identified pollutants of concern.

5.2 Common Waste Types and Categories

A number of common waste types and categories are described below, along with some suggested waste acceptance criteria that are aimed at protecting NSWI facilities from inadvertent acceptance of hazardous waste. Certain pumpable wastes are more susceptible to containing hazardous waste than others. Those waste types may require additional safeguards be put in place prior to acceptance. If a facility proposes to describe wastes they plan to accept using general category descriptions, each category should be sufficiently described so that DEQ can identify whether a particular waste type can be accepted at the facility.

Accepting a waste type that was not identified in the siting or design of the facility, or accepting a waste not identified in the facility Operating Plan, can lead to enforcement actions ~~and~~/or major process upsets at the facility. Accepting a new waste type is never an ad-hoc decision made at the facility when presented by a customer.

5.2.1 Grease Trap Waste

Grease trap waste typically originates from a plumbing device (grease trap, grease interceptor, grease recovery device or, grease converter) designed to intercept the majority of greases and solids before they enter a POTW. The content of grease trap waste originating from a restaurant or food service location is generally well known and it is usually appropriate for a generator to rely on “acceptable knowledge” for this type of waste when performing their waste characterization required under RCRA. However general safeguards should be included in the Operating Plan of the facility accepting the waste, and these measures should be made known to the facility’s customers in a written policy.

5.2.2 Wastewater from Industrial Production Water Processes

While many industrial processors and other manufacturers store and treat the wastewater they generate themselves on-site, some facilities outsource these activities to NSWIs. Each industrial process is unique and it is necessary for NSWI facility staff to fully understand each process in order to confirm the contents of any pumpable waste that is presented for acceptance. Waste loads from a single industrial production process over time typically have uniform constituents, and waste shipments may differ only within a range of constituent concentrations. Food processing waste is common in Idaho and many of these processes create organic wastes with high nutrient content and potential for odor. Facilities that accept these wastes should pay special attention to treatment, odor management, sludge management, and sludge disposal in their design approval application and Operating Plan. DEQ strongly recommends NSWI facilities require a detailed waste profile and a specific waste acceptance policy delineating the parameters of each waste prior to acceptance.

~~5.2.25.2.3~~ Wastes from Oil and Gas Exploration, Production and Operations

While these wastes are generally exempted from the management and disposal requirements applicable to hazardous waste, they remain regulated as solid waste and may still contain hazardous constituents that may require costly remediation if managed poorly. Also, hazardous constituents may concentrate in sludge generated at the facility. These factors should be considered when deciding whether to accept one or more of these wastes and when siting and

designing a NSWI facility. NSWIs may also consider implementing a testing or confirmation protocol to ensure “technologically enhanced naturally occurring radioactive material (TENORM) is identified and excluded from the facility. DEQ’s TENORM rules can be found in IDAPA 58.01.10. Waste acceptance policies should require initial waste characterization through the submission of analytical test results for each production site since geology can affect what types of fluid are used in the process. Waste compatibility and hazardous waste generation in sludge at the NSWI facility are the factors driving DEQ’s recommendation.

5.2.3 Equipment Washdown, Car Wash, Parking Lot, Stormwater Sump Wastes

5.2.4 These Pumpable Wastes from Sumps, Pits, Trenches, Traps or Similar Sources

Many facilities have devices referred to as sumps, pits, trenches, or traps, designed to collect debris and dirt before entering the sanitary sewer system or being otherwise discharged. DEQ collectively refers to these devices as “sumps”. The sand, grit, dirt, liquids, and sludge removed from these devices are solid waste and generally referred to as “sump waste.” Examples include waste from equipment washdown collection pits, car wash sumps, parking lot/stormwater sediment traps, and similar devices. Sump wastes require close scrutiny prior to acceptance. Factors to consider include public access controls at the wash facility or sump, and the type of vehicles or equipment being washed or stored at a washdown site, and the land uses surrounding a stormwater basin. These are all relevant to whether analytical testing of the waste should be required prior to acceptance.

Sumps and other sources of liquid and semi-liquid waste Sump waste retrieved from sumps which can be accessed only by the party controlling and utilizing the sump or source can be more likely to produce wastes with consistent content. When a source sump produces consistent content it may be appropriate for a NSWI facility to rely on a generator’s waste characterization that utilizes “acceptable knowledge.” However, other factors may need to be considered, such as whether the process or activities that contributed content to the sump or source has changed. The types of vehicles or equipment being washed, or the types of materials likely to be washed off the vehicles or equipment, are examples of a change in process.

Typically with these types of waste sources, a NSWI facility may initially require analytical testing in order to confirm that a waste from a particular source sump is non-hazardous prior to acceptance, and as well as to analyze compatibility. Following development of a source profile and submission of the initial analytical results, confirmation sampling can be required at regular intervals, typically on an annual basis or biannual basis. Note that multiple source sump locations at a single facility may require separate source waste profiles in order to track each source independently.

Sumps and other sources of liquid and semi-liquid waste Waste retrieved from sumps which can be accessed by the public can have unpredictable content. Stormwater drains and 24-hour unstaffed carwash sumps, for instance, provide an attractive means by which to dispose of unwanted and sometimes hazardous materials. Many POTWs no longer accept waste from these types of sources because of their unpredictable content, or because of specific instances of hazardous waste entering the wastewater facility from such sources. Any facility accepting waste from these types of sources should put stringent safeguards in place in order to protect the

facility from inadvertent acceptance of regulated hazardous waste. It is inappropriate, in most cases, for generators of waste from these uncontrolled sumps and other sources to rely on “process knowledge” when making their waste determination required under RCRA.

Facilities accepting ~~these~~ wastes from uncontrolled sumps and relying on process knowledge may be putting their facility in a position of financial and regulatory risk. The most protective approach for facilities accepting waste from uncontrolled sumps and other sources is to require analytical testing of every shipment or load.

Note that PFAS (per- and polyfluoroalkyl substances) are an emerging constituent of concern whose regulatory status is expected to evolve. Although use of PFAS in many products has been phased out, historically these compounds have been found at car washes because of their water-repelling characteristics. See [Section 5.2.14](#) of this guidance for more information, and Section 8 for associated websites and resources.

For more information on hazardous waste characterizations and sump waste see DEQ’s fact sheet entitled “Managing Sump Waste” on the DEQ Hazardous Waste Program’s website.

5.2.45.2.5 Leachate from Waste Disposal Sites

Landfill leachate has historically been sent to POTWs for disposal but NSWIs may provide an attractive alternative. NSWI owners/operators should engage technical consultants to determine if landfill leachate should be accepted and to develop a waste acceptance policy. Research is available on typical leachate content, but each landfill will generate leachate with its own characteristics, and even at the same landfill the content of leachate may change significantly over time. Customer submission of analytical testing results to the NSWI with every shipment is recommended, both to establish it as ~~nonhazardous and for compatibility analysis~~ non-hazardous and for compatibility analysis. Note that PFAS may be found in landfill leachate at elevated levels if the landfill has accepted concentrated sources in the past. Low levels of PFAS can be expected in all leachate given their widespread use in consumer products. See [Section 5.2.14](#) of this guidance for more information.

5.2.55.2.6 Fuel Contaminated Wastewater

One NSWI facility owner/operator concern is likely to be this waste’s ignitability and compatibility with other wastes. Since each load of fuel contaminated wastewater is likely to have different concentrations, analytical test results for each load may assist in compatibility determinations and waste management decisions. DEQ has produced a document, “FAQs: Management of Test Fluid from Underground Storage Tank Equipment,” that may assist NSWIs that plan to accept this type of waste. A link to this resource is available in [Section 8](#) of this guidance.

5.2.65.2.7 Concrete Hydro-demolition and Hydro-excavation Slurry

Concrete hydro-demolition waste may include excess concrete debris, dewatered tank precipitate, and hydro-demolition water. A generator may be required to treat hydro-demolition water to neutralize pH prior to transport to a NSWI for disposal. At a minimum, DEQ recommends that NSWI owners/operators make customers aware that the facility will perform routine confirmation sampling of this type of waste.

Hydro-excavation of uncontaminated soil with uncontaminated source water does not create a regulated solid waste. This material would be considered inert under the Solid Waste Rules and does not require disposal at an authorized solid waste facility. Note that, due to the potential for high levels of total suspended solids, the discharge of this material to or near surface waters may be problematic. DEQ's surface water program can provide direction on how and where this material can be discharged. If either the source water or the soil is contaminated, a generator should analyze the waste and have a qualified professional review the results in order to determine how it may be disposed.

5.2.75.2.8 ~~Groundwater~~ Ground Water Remediation Wastewater

Similarly, ~~load of groundwater~~ ground water remediation wastewater will have its unique pollutant concentrations. The particular constituents will also vary depending on the remediation project. Analytical test results for each load may assist in compatibility determinations and waste management decisions.

5.2.85.2.9 ~~Wastewater from Cleanups and Emergencies~~

Each load of wastewater from a cleanup or an emergency situation will be unique. ~~Analytical test results will assist~~ Analytical test results for each load may assist in compatibility determinations and waste management decisions.

5.2.95.2.10 ~~Domestic Septage~~

~~“Septage is a” and “domestic septage” are general~~ term for terms used in this guidance to refer to the contents removed from septic tanks, portable toilets, privy vaults, wastewater holding tanks, type III marine sanitation devices, recreational vehicle holding tanks, very small wastewater treatment plants, or semipublic facilities (e.g., schools, motels, mobile home parks, campgrounds, and small commercial endeavors) receiving wastewater strictly from domestic sources, a constituent of which is nearly always, or potentially, human waste. The term “nondomestic septage” is avoided in this guidance due to its imprecise and inconsistent use. The terms “septage” or “domestic septage” are used to refer to the liquid and semi-liquid waste from residences or facilities with waste characteristics similar to residential sources like schools, motels, campgrounds, and office buildings, but would generally describe pumpable waste.

~~Domestic septage that is kept separate from other types of liquid waste has more options when it comes to disposal, and it is regulated under the~~ The Individual/Subsurface Sewage Disposal Rules Governing the and Rules for Cleaning of Septic Tanks (IDAPA 58.01.15). See . In most cases, afterstate that a site may accept domestic septage is co-mingled with other types of liquid waste it is then regulated under the Solid Waste Management Rules. for burying under earth or drying “in a location and by a method” approved by DEQ. See IDAPA 58.01.03.050.03.d. An owner/operator of a NSWI facility may propose to accept domestic septage as part of its site, design, and Operating Plan approvals, and DEQ will review the proposal as it reviews any other domestic septage disposal request, as a part of the NSWI facility approval application. Note that IDAPA 58.01.03.051 also require haulers of this material to be licensed annually.

Comingling wastes containing domestic septage with other ~~waste types~~ pumpable waste would require prior DEQ approval and is not recommended since the comingled waste can pose odor

~~and treatment challenges at NSWI facilities.~~ More discussion is available in [Section 5.2.12 the Waste Mixture and Compatibility section](#) and [Section 5.12](#) of this guidance. The mixture would also create regulatory challenges. After mixture the waste and waste impoundment would be regulated under the Wastewater Rules as municipal wastewater, in order to address the potential for human pathogens in the waste and the impoundment, as well as the Solid Waste Rules, to address the non-domestic constituents in the mixture. This will result in additional and potentially costly operational requirements. Comingling domestic septage or any waste containing human waste and the potential for human pathogens without prior DEQ approval may also be grounds for the initiation of an enforcement action.

~~Wastes accepted at NSWI facilities as Domestic septage that have~~has not been mixed or combined with other types of waste ~~de~~prior to acceptance at a NSWI facility would not ~~pose a high risk of containing be expected to contain~~ hazardous waste, ~~and the general safeguards applicable to all but unstaffed vault toilets and other publicly accessible and unattended sources could contain unwanted materials and in some cases hazardous~~ wastes ~~can be applied~~. A facility should require analytical testing if there are indications that other wastes are present. Staff should remain vigilant and scrutinize loads and paperwork for inconsistencies that can reveal issues. ~~IDAPA 58.01.15 states that a site may be approved by DEQ to accept domestic septage for drying “in a location and by a method” approved by DEQ. See IDAPA 58.01.15.003.03.d. A NSWI that has an approved site, design, and operating plan that includes the acceptance of domestic septage meets the requirements in the Rules Governing the Cleaning of Septic Tanks. Note that those rules also require haulers of this material to be licensed. Note that sites where septage is only consolidated and stored for transfer are regulated as septage transfer stations under the Wastewater Rules. For a link to more information on septage management and disposal see Section 8 of this guidance.~~

5.2.105.2.11 VSQG Waste

As a Tier III solid waste facility, a NSWI can accept Very Small Quantity Generator (VSQG) waste if it is approved as part of its siting, design, and Operating Plan. Acceptance of this type of waste may be contingent on site conditions, or require additional design features and operational safeguards. While VSQGs are relieved of many of the onerous requirements found in RCRA, the waste itself poses the same risk to human health and the environment that it would pose from a larger generator, especially if wastes are collected and consolidated into larger quantities.

Certain VSQG wastes may be more likely to affect liner integrity. Facilities should carefully evaluate how a VSQG waste may affect facility equipment and materials during the design of the facility.

Sludge removed from ~~a nonhazardous solid waste~~an impoundment is considered a new point of generation and requires the NSWI facility to analyze the content of the sludge to determine if it is hazardous waste. If a facility is accepting VSQG waste, the sludge may be more likely to concentrate constituents and test as hazardous. This may require the NSWI to be considered a “Small Quantity Generator” of hazardous waste, or even a “Large Quantity Generator,” both of which require additional and specific waste management practices. Sludge that is determined to be hazardous waste requires proper disposal at a permitted TSD.

5.2.115.2.12 Receiving Mixed Pumpable Waste Loads Containing Multiple Waste Types or Sources

Waste haulers should be familiar with the NSWI's waste acceptance policies and only mix wastes from multiple generators or locations if the policy allows it. The mixture of domestic septage with other pumpable wastes, for instance, may cause the waste to be rejected at the NSWI facility if it requires segregation of domestic septage for storage and treatment. Similarly, a load of controlled source waste mixed with one uncontrolled source may lead to rejection, depending on the NSWI facility's waste acceptance policy for uncontrolled sources.

5.2.125.2.13 Prohibited Waste

NSWI facilities may not accept regulated non-VSQG hazardous waste, municipal wastewater, TENORM, or waste types not identified in the facility Operating Plan. Facilities should make public a list of waste types not accepted at the facility so that customers and potential customers are made fully aware of these facility limitations.

5.2.14 PFAS

Some pumpable wastes from ground water remediation projects or PFAS source cleanups may contain concentrated sources of PFAS if the source state has restricted PFAS disposal. Analytical testing is not advised at this time due to (1) the prevalence of the chemicals and (2) a lack of consensus on a meaningful regulatory limit. However, NSWI facility owners/operators are advised to require customers certify whether waste shipments contain any of the following:

- Waste derived in whole or in part from a cleanup of PFAS related compounds
- Waste derived in whole or in part from a facility producing such compounds;
- Waste derived in whole or in part from a concentrated PFAS product like aqueous film-forming foam concentrates (AFFF)
- Another concentrated source of PFAS related compounds

DEQ may require additional operating criteria at facilities accepting concentrated sources of PFAS. For the most up-to-date information on PFAS and emerging regulations see the web link in Section 8 of this guidance.

5.3 Signs

Signage at each entrance to a NSWI facility is required and informs customers of the name of the facility, hours of operation, waste types accepted, and an emergency contact. Signs should be easily readable by those entering the facility and lettering should be large enough to be seen from a reasonable distance. Poorly located signs or too small of print can lead to misunderstandings with customers and additional work for the staff. Additional information such as fees, prior notification for special wastes, and other information can help educate NSWI customers. Requirements for signage at Tier III solid waste management facilities are contained in IDAPA 58.01.06.013.03.b.

While not required by the Solid Waste Rules, signs *within* the facility can help direct customers to specific areas such as those designated for specific types of waste. The sign should clearly list specific waste types that may be placed or are not allowed to be placed in the designated area.

5.4 Speculative Accumulation

Speculative accumulation is prohibited at solid waste facilities. Idaho's Solid Waste Rules define speculative accumulation as "stock piles of materials or recyclables to be processed for reuse or disposal when fifty percent (50%) of the material is not reused or disposed by the end of the following calendar year after the date of first receipt by the facility, and which may create a nuisance or public health impact" (IDAPA 58.01.06.005.45).

As an example, if a facility started stockpiling a material on January 2, 2014, and accumulated 300 cubic yards of the material, the facility would have until December 31, 2015, to dispose or reuse at least 150 cubic yards of the material. For NSWIs, the speculative accumulation prohibition may apply to pumpable waste received, or stockpiles of sludge or solidified material awaiting reuse or disposal.

For pumpable waste received, NSWI facilities are required to provide calculations in the design approval application pertaining to their operational design capacity as well as any methods of liquids reduction that will be employed. This information should show the facility capable of meeting the speculative accumulation requirement by illustrating the required minimum of 50% reduction of pumpable waste received or that it is processed into a new material, within a 12-month period. These new materials, as well as any sludges or other process outputs, will also be subject to the speculative accumulation requirement. While application information is expected to show the facility's capacity to comply, NSWI facilities are also required to maintain records that illustrate that the facility is in actual compliance with the speculative accumulation provision. If a facility's plans for treatment or processing of pumpable waste do not meet this regulatory requirement, DEQ may approve an alternative material retention limitation.

Stockpiling, and any recycling or reuse of materials, should be adequately described in the facility's Operating Plan. DEQ supports legitimate efforts to recycle or reuse materials, and will provide assistance to facilities entertaining recycle and reuse options.

5.5 Communications

Operating Plans should identify communication equipment available onsite and emergency response notification. Communication requirements for Tier III facilities are contained in IDAPA 58.01.06.013.03.e. Additional discussion on communications is provided in the next section.

5.6 Fire Prevention and Control

Tier III owners/operators are required to include fire prevention and control measures in their Operating Plans. Fires can occur for a variety of reasons. Spontaneous combustion of organic materials, incompatible wastes, equipment exhaust systems contacting combustible waste, or dry vegetation are all potential causes of fires. Owners/operators need to be prepared by having a plan to deal with fires. In addition, staff should understand the waste types accepted at the

facility and have adequate firefighting equipment and knowledge of when to fight fires and when to contact the local fire department. Operating Plans should contain emergency contact information, and emergency contact information should be posted beside or programmed into the land-line telephones. If personnel are provided cell phones, emergency contact information should be programmed into cell phones. Fire Prevention and Control requirements for Tier III facilities are contained in IDAPA 58.01.06.013.03.f.

5.7 Facility Access

To prevent uncontrolled dumping, vandalism, and liability from injury, all facility owners/operators need to secure their sites when staff is not on duty by using adequate fencing and/or natural features. Natural features may include large water bodies, rugged terrain, or other similar features that limit vehicle and foot traffic from entering the facility. Entrances should be controlled with gates that are locked when staff is not present. Facility access requirements for Tier III facilities are contained in IDAPA 58.01.06.013.03.g.

5.8 Odor and Nuisance Control

All owners/operators must control for nuisances. Nuisance issues are one of the public's primary concerns surrounding solid waste sites. Odor, vectors (e.g., flies and rodents), and visibly blowing waste are a few of the nuisance conditions that can occur at solid waste facilities. Effectively managing incoming waste, understanding how wastes break down in impoundments, and accounting for compatibility issues in advance can help reduce odor and other nuisance issues. ~~An~~

~~The facility's~~ Operating Plan must ~~integrate the operational aspects of the facility's~~ include an Odor Management Plan, or otherwise detail how odor and other nuisance conditions will be prevented, and identify contingency measures to be implemented should odor or other nuisance conditions arise. Nuisance control requirements for Tier III facilities are contained in IDAPA 58.01.06.013.03.i.

5.9 Sludge Management Plan

A facility Operating Plan should address the generation of sludge at the NSWI, sludge removal process and frequency, liner inspections after sludge removal, sludge management after removal, and sludge disposal location. This can be achieved ~~by integrating the operational aspects of the facility's Sludge Management Plan in a Sludge Management Plan section of the facility Operating Plan. Sludge Management Plans should address the potential for metals and other waste constituents to concentrate in an impoundment and, specifically, in impoundment sediments and sludge. As waste constituents concentrate they may reach or surpass hazardous waste thresholds and a NSWI may become a hazardous waste generator.~~ Note that the frequency of sludge removal may affect your generator status (Very Small, Small, or Large) if your sludge tests as hazardous. Frequency may also affect declining water balance calculations. The requirements in IDAPA 58.01.16.650 may apply to the sludge generated at NSWIs and facility operations should address these requirements.

5.10 Bird Hazards to Aircraft

~~All Tier III solid waste facilities~~ All NSWIs located within 10,000 feet of any airport runway used by turbojet aircraft or 5,000 feet of any airport used by piston-type aircraft must ensure waste is managed to not attract birds and not increase the likelihood of bird/aircraft collisions. In 2013, 10 bird/aircraft collisions were reported in Idaho, with half of these collisions resulting in \$50,000 or greater damage to the aircraft. Facility owners/operators should continue to evaluate waste types accepted at their facility to ensure birds do not become a hazard to aircraft. Requirements for preventing bird hazards to aircraft for Tier III solid waste facilities are contained in IDAPA 58.01.06.013.03.j.

5.11 Stormwater Run-on and Run-off Control

A Storm Water Management Plan is submitted during design review, which should also include operational measures to prevent stormwater and ~~or~~ snowmelt from running into facility impoundments. Stormwater run-on and run-off controls apply to sludge management areas as well as impoundments. Stormwater and ~~or~~ snowmelt that has contacted waste must be managed as waste. Requirements for Tier III stormwater run-on and run-off controls are contained in IDAPA 58.01.06.013.03.l.

Stormwater run-on and run-off control should include stormwater best management practices (BMPs), stormwater control system maintenance, and monitoring of the stormwater control system to ensure the system is functioning as designed. Discussion on stormwater control system BMPs, maintenance, and monitoring should be included in the facility's Operating Plan.

Any time stormwater control design change is anticipated, updated design plans shall be submitted to DEQ for review and approval prior to implementing design changes. Updated facility maps shall also be included with the Operating Plan and submitted to the local public health district for review and approval. For more information on stormwater BMPs, see DEQ's and EPA's stormwater web pages: site links provided in Section 8 of this guidance.

- ~~• DEQ's Stormwater in Idaho webpage:~~
- ~~• EPA's Storm Water Program (IPDES scheduled to begin storm water permitting in 2021)~~

5.12 Compatibility: Comingling, Mixing and Consolidating Wastes On-Site

NSWI owners/operators are encouraged to keep waste types segregated whenever possible. When waste types are proposed to be mixed with one another in a single impoundment, a qualified professional should review the compatibility of the wastes prior to the wastes being mixed. The review should consider, at a minimum, any effect on waste treatment, generation of odors, the creation of chemical reactions, and effect on liner integrity. If a facility plans to mix wastes as a standard practice, a waste compatibility analysis addressing the proposed management practice(s) should be provided as part of facility siting and design review.

5.13 Temporary Storage of Waste

Temporary storage of any liquid or semi-liquid waste in a manner not approved in the design of the facility or in the facility Operating Plan requires prior approval from the local public health district. Temporary storage will only be approved for emergency short-term use. Unless it is the result of a declared emergency, lack of facility capacity is not considered an emergency.

5.14 Employee Training

While not included in the Solid Waste Rules, employee training is an integral part of every facility's successful operation. Educate staff on the facility's Operating Plan, policies, regulations, and guidance pertaining to the waste types accepted and managed, and on potential environmental impacts and liability issues resulting from improper waste management. Develop and implement a comprehensive training program to help staff identify prohibited waste types, scrutinize paperwork, and enforce site restrictions. Facility employees should also receive health and safety training as it pertains to their jobs and activities around the facility.

A copy of any training, whether on-site or off-site, should be retained in the employee's file to help demonstrate the employee's competency and the frequency of training. Regular, periodic employee training will not only result in a safe, well-run facility but may also reduce insurance costs and lost work time from injuries and accidents.

DEQ strongly encourages NSWI owners/operators to have a licensed wastewater operator on staff. Managing and treating pumpable waste can be more complex than managing and treating municipal wastewater, especially if multiple waste types are being comingled. If a facility repeatedly exhibits operational difficulties resulting in nuisance conditions or other noncompliance with its regulatory approvals, DEQ may require a facility to engage a licensed wastewater professional.

5.15 Worker Safety

While not included in the Solid Waste Rules, worker safety training is highly recommended. DEQ may consider certain types of training, such as that involving the identification of hazardous waste, to be crucial part of operations that affects design considerations. NSWI workers face many safety issues during their workday, including exposure to different wastes, operation of heavy equipment, and in some cases drowning. Facility management should provide the safest working conditions possible. Not every hazard will be mitigated, but training staff on the dangers associated with their job, providing clear traffic routes to and from impoundments, and providing the necessary personal protective equipment to on-site workers will help reduce accidents at the site and decrease insurance costs.

5.16 Required Documentation

All Tier III solid waste facility owners/operators are required to maintain certain documents on-site. All approved plans such as the facility Operating Plan, Ground Water Monitoring Plan, air emissions monitoring plan, and Closure/post-closure Plan must be retained on site. Other documentation such as daily logs demonstrating volumes and types of waste, employee training

records, random load inspection forms, rejected load logs, and other similar documents should also be maintained on site as an employee resource and as evidence of compliance with the Solid Waste Rules.

6 Closure of a Facility

All Tier III solid waste facility owners/operators are required to submit a Closure Plan for approval and, at closure, comply with the approved Closure Plan as well as the closure requirements in the Solid Waste Rules. The timeframes for Closure Plan submission is found in IDAPA 58.01.06.013.08. As a general rule an approvable NSWI Closure Plan should follow industry standards for the closing of an industrial impoundment, including removal of all sludge to an appropriate facility, removal of any synthetic liners, and adequate sampling site-wide to identify and remove any contaminated soil. DEQ plans to provide additional information on facility closure in a future guidance document.

67 Glossary

The following definitions, contained within various regulations, will assist in understanding discussions within this guidance. When state statute or the Solid Waste Rules provide a definition, the state definition is provided below. If there is no state definition, the federal definition is provided:

Acceptable Knowledge: EPA and DEQ regulations allow a hazardous waste determination to be made through use of “acceptable knowledge” in addition to or in lieu of laboratory testing. Acceptable knowledge must be accurate and can include knowledge of the processes that created the waste, the chemical constituents of the waste, and whether or not listed hazardous wastes are present. It does not include information that does not pertain directly to the waste at the time of disposal, such as testing from another facility. Acceptable knowledge is commonly used to narrow the number of tests required to determine if waste is hazardous. However, it may also be used to reduce testing frequency by facilities that can demonstrate the waste is produced from a closed, controlled process that does not change.

Domestic Septage: as used in this guidance, synonymous with the term “septage.”

Hazardous Waste: a waste or combination of wastes of a solid, liquid, semisolid, or contained gaseous form which, because of its quantity, concentration of characteristics (physical, chemical, or biological) may:

- a) Cause or significantly contribute to an increase in deaths or an increase in serious, irreversible, or incapacitating reversible illness; or
- b) Pose a substantial threat to human health or the environment if improperly treated, stored, disposed of, or managed. Such wastes include, but are not limited to, materials which are toxic, corrosive, ignitable, or reactive, or materials which may have mutagenic, teratogenic, or carcinogenic properties but do not include solid or dissolved material in domestic sewage, or solid or dissolved materials in

irrigations return flows or industrial discharges which are point sources subject to national pollution discharge elimination system permits under the federal water pollution control act, as amended, 33 U.S.C., Section 1251 et seq., or source, special nuclear, or byproduct material as defined by the atomic energy act of 1954, as amended, 42 U.S.C., Section 2011 et seq. (Idaho Code §39-4403)

Impoundment: defined in this guidance as any lined or unlined area of a facility where pumpable waste or sludge that does not pass the paint filter test is managed outside of a closed container, including any area where solidification occurs. The guidance uses the term “impoundment” to distinguish these facilities, regulated by DEQ’s Solid Waste Program, from “wastewater lagoons” regulated by DEQ’s Wastewater Program. Also instructive, EPA defines surface impoundment in the Coal Combustion Residual (CCR) Rules as a natural topographic depression, man-made excavation, or diked area, which is designed to hold an accumulation of CCR and liquids, and the unit treats, stores, or disposes of CCR. (40 CFR 257.2)

Industrial Solid Waste: solid waste generated by manufacturing or industrial processes that is not a hazardous waste regulated under subtitle C of RCRA. Such wastes may include, but are not limited to, waste resulting from the following manufacturing processes: electric power generation; fertilizer and agricultural chemicals; food and related products and byproducts; inorganic chemicals; iron and steel manufacturing; leather and leather products; nonferrous metals manufacturing/foundries; organic chemicals; plastics and resins manufacturing; pulp and paper industry; rubber and miscellaneous plastic products; stone, glass, clay, and concrete products; textile manufacturing; transportation equipment; and water treatment. This term does not include mining waste or oil and gas waste. (40 CFR 257.2 and 40 CFR 258.2)

Industrial Wastewater: any waste, together with such water as is present, that is the by-product of industrial processes including, but not limited to, food processing or food washing wastewater. (IDAPA 58.01.16.010.30)

Land Application: a process or activity involving application of wastewater, surface water, or semi-liquid material to the land surface for the purpose of disposal, pollutant removal, or ground water recharge. (IDAPA 58.01.16.010.31)

Lateral Expansion: means a horizontal expansion of the waste boundaries of an existing MSWLF unit. (40 CFR 258.2)

Leachate: a liquid that has passed through or emerged from waste and contains soluble, suspended, or miscible materials removed from such waste. Leachate is formed when precipitation filters through wastes placed in a landfill. When this liquid comes in contact with buried wastes, it leaches, or draws out, chemicals or constituents from those wastes. (IDAPA 58.01.06, 40 CFR 257.2, 40 CFR 258.2, and Idaho Code §39-7403)

Liquid Waste: liquid wastes are any waste material that is determined to contain “free liquids” as defined by Method 9095B (Paint Filter Liquids Test), included in Test Methods for Evaluating Solid Waste, Physical/Chemical Methods which is incorporated by reference. (EPA Publication SW-846)

Municipal Wastewater: unless otherwise specified, sewage and associated solids, whether treated or untreated, together with such water that is present. Also called domestic wastewater.

Industrial wastewater may also be present, but is not considered part of the definition. (IDAPA 58.01.16.010.39)

Non-municipal Solid Waste: a solid waste that is not mixed with household waste and not excluded by IDAPA 58.01.06.001.03. Examples of non-municipal solid waste may include construction/demolition, industrial, and inert wastes. (IDAPA 58.01.06.05.25)

NSWI: defined and used in this guidance to refer to an impoundment facility regulated under the Solid Waste Rules as a “Non-hazardous Solid Waste Impoundment,” or “NSWI”. A NSWI is an impoundment facility receiving pumpable waste where: (1) the waste does not pass the paint filter test prior to placement in an impoundment, and (2) operations are not otherwise regulated under a discharge or land application permit.” NSWIs may be stand-alone, or may be co-located at an approved landfill or other permitted solid waste facility. Facilities engaged in food processing or other manufacturing or industrial activities that manage their liquid waste stream(s) onsite are not managing pumpable wastes as that term is defined, and are generally not regulated as NSWIs. Furthermore, these facilities are often regulated under a discharge permit or wastewater reuse permit (aka land application permit) and therefore excluded from regulation by DEQ’s Solid Waste Program.

Open Dump: a facility for the disposal of solid waste that does not comply with this part. (40 CFR 257.2)

Operating Plan: the term ‘operating plan’ is used in the Solid Waste Rules. Some facilities use other synonymous terms such as ‘operations plan’ or ‘plan of operations.’ However, the ‘operating record’ is not the same. An ‘operating record’ refers to the continuous documentation of facility activities.

Operator: the person(s) responsible for the overall operation of all or part of a site or facility. (IDAPA 58.01.06.05.28)

Owner: the person(s) who owns land or a portion of the land on which a site or facility is located. (IDAPA 58.01.06.05.29)

PFAS: per-and polyfluoroalkyl substances (PFAS) are a group of man-made chemicals that includes PFOA, PFOS, GenX, and many other chemicals. PFAS have been manufactured and used in a variety of industries around the globe, including the United States since the 1940s. PFOA and PFOS have been the most extensively produced and studied of these chemicals. Both chemicals are very persistent in the environment and in the human body – meaning they don’t break down and they can accumulate over time. There is evidence that exposure to PFAS can lead to adverse human health effects. The US EPA and states are investigating sources of PFAS ground water impacts including landfills. It is recommended that owners/operators consult with a qualified professional before determining to accept waste containing PFAS and to establish protective parameters in their site approval application, design approval application, and Operating Plan. NSWI facilities should also keep informed on emerging PFAS information. It is important to note that disposal facility owners/operators bear the costs associated with ground water contamination and remediation.

Plans and Specifications: a term used in the Wastewater Rules to refer to the materials submitted to DEQ under an engineer’s stamp that are intended to satisfy applicable facility and

design standards. For a NSWI facility “Plans and Specifications” should be submitted as part of the facility design approval application.

Preliminary Engineering Report: The preliminary engineering report for the municipal wastewater treatment or disposal facility is the report that addresses specific portions of the systems as they are being contemplated for design. These reports address specific purpose and scope, design requirements, alternative solutions, costs, operation and maintenance requirements, and other requirements as described in Section 411 of the Wastewater Rules. Preliminary engineering reports are generally project specific as opposed to an overall system-wide plan, such as a facility plan. (IDAPA 58.01.16.010.57)

Processing Facility: a facility that uses biological or chemical decomposition to prepare solid waste for reuse, excluding waste handling at transfer stations or recycling centers. (IDAPA 58.01.06.05.32)

Pumpable Waste: wastes, including non-domestic septage, sludge, wastewater and non-municipal solid wastes, which are pumped from a holding area or container into a watertight tank truck or equivalent and transported for processing or disposal. (IDAPA 58.01.06.05.34)

Qualified Professional: qualified professional means a licensed professional geologist or licensed professional engineer, as appropriate, holding current professional registration in good standing and in compliance with applicable provisions in Chapter 12, Title 54 Idaho Code. (IDAPA 58.01.06.005.35)

Reuse: the use of reclaimed wastewater for beneficial uses including, but not limited to, land treatment, irrigation, ground water recharge using surface spreading, seepage ponds, or other unlined surface water features. (IDAPA 58.01.16.010.71)

Septage: under the Solid Waste Rules septage is defined as a semisolid consisting of settled sewage solids combined with varying amounts of water and dissolved materials generated from a septic tank system (IDAPA 58.01.06.005.41). The Wastewater Rules say septage is a general term for the contents removed from septic tanks, portable vault toilets, privy vaults, wastewater holding tanks, very small wastewater treatment plants, or semi-public facilities (i.e., schools, motels, mobile home parks, campgrounds, small commercial endeavors) receiving wastewater from domestic sources. Non-domestic (industrial) wastes are not included in this definition. This does not include drinking water treatment residuals that may be held in a holding tank. (IDAPA 58.01.16.010.75)

Septage Transfer Station: a place where septage from more than one (1) hauler is accumulated for collection and subsequent removal without processing to a treatment facility. (IDAPA 58.01.16.010.76)

Site Specific Classification: a request by an applicant for approval of a nonmunicipal solid waste facility at a lower tiered classification. (IDAPA 58.01.16.009.06)

Sludge: the semi-liquid mass produced and removed by the wastewater treatment process. (IDAPA 58.01.16.010.79)

Solid Waste: 40 CFR 257.2 defines solid waste as “any garbage, or refuse, sludge from a wastewater treatment plant, water supply treatment plant, or air pollution control facility and other discarded material, including solid, liquid, semi-solid, or contained gaseous material resulting from industrial, commercial, mining, and agricultural operations, and from community activities, but does not include solid or dissolved materials in domestic sewage, or solid or dissolved materials in irrigation return flows or industrial discharges that are point sources subject to permit under 33 U.S.C. 1342, or source, special nuclear, or by-product material as defined by the Atomic Energy Act of 1954, as amended (68 Stat. 923).”

Sump: as used in this guidance, a general reference to a device described as a sumps, pit, trench, trap, or similar device designed to collect debris and dirt before entering the sanitary sewer system or being otherwise discharged. DEQ collectively refers to these devices as “sumps”. The sand, grit, dirt, liquids, and sludge removed from these devices are solid waste and generally referred to as “sump waste.” Examples include equipment washdown collection pits, car wash sumps, and parking lot/stormwater sediment traps.

Technologically Enhanced Naturally Occurring Radioactive Material (TENORM): Any naturally occurring radioactive materials not subject to regulation under the Atomic Energy Act whose radionuclide concentrations or potential for human exposure have been increased above levels encountered in the natural state by human activities. TENORM does not include source, byproduct or special nuclear material licensed by the U.S. Nuclear Regulatory Commission under the Atomic Energy Act of 1954. (IDAPA 58.01.10.010.14)

Treatment: A process or activity conducted for the purpose of removing pollutants from wastewater. (IDAPA 58.01.16.010.85)

Very Small Quantity Generator (VSQG): formally conditionally exempt small quantity generators (CESQG). A facility that generates 100 kilograms (220 pounds) or less per month of hazardous waste, or 1 kilogram (2.2 pounds) or less per month of acutely hazardous waste. (40 CFR 261.5)

Waste Management Area: defined in this guidance as any area where wastes that pass the paint filter test, such a bulked or solidified waste, are managed.

Wastewater: any combination of liquid or water and pollutants from activities and processes occurring in dwellings, commercial buildings, industrial plants, institutions and other establishments, together with any ground water, surface water, and storm water that may be present; liquid or water that is chemically, biologically, physically or rationally identifiable as containing blackwater, gray water or commercial or industrial pollutants; and sewage. (IDAPA 58.01.16.010.89)

Wastewater Lagoon: manmade impoundments for the purpose of storing or treating wastewater. (IDAPA 58.01.16.010.91)

[Continues on Next Page]

8 Links and Resources

The following list of links and resources will be updated from time-to-time to assist readers in locating them. This guidance may be found at: [insert link]. Please inform DEQ's Solid Waste Program Manager of any broken or out-of-date links and resources. The list was last updated JANUARY 2020.

8.1 Idaho Rules and Statutes

Idaho Solid Waste Facilities Act (ISWFA)

<https://legislature.idaho.gov/wp-content/uploads/statutesrules/idstat/Title39/T39CH74.pdf>

Statute Pertaining to County Solid Waste Responsibilities, Idaho Code §39-4403

<https://legislature.idaho.gov/statutesrules/idstat/title31/t31ch44/sect31-4403/>

Statute Pertaining to Intentional Violations of Idaho Law, Idaho Code §39-4415

<https://legislature.idaho.gov/statutesrules/idstat/title39/t39ch44/sect39-4415/>

Individual/Subsurface Sewage Disposal Rules and Rules Governing the Cleaning of Septic Tanks, IDAPA 58.01.03

<https://adminrules.idaho.gov/rules/current/58/580103.pdf>

Solid Waste Management Rules, IDAPA 58.01.06 (the “Solid Waste Rules”):

<https://adminrules.idaho.gov/rules/current/58/580106.pdf>

Rules Regulating the Disposal of Radioactive Materials Not Regulated Under the Atomic Energy Act of 1954, As Amended, or “TENORM Rules,” IDAPA 58.01.10.

<https://adminrules.idaho.gov/rules/current/58/580110.pdf>

Idaho's Ground Water Quality Rule, IDAPA 58.01.11

<https://adminrules.idaho.gov/rules/current/58/580111.pdf>

Wastewater Rules, IDAPA 58.01.16.010.30

<https://adminrules.idaho.gov/rules/current/58/580116.pdf>

8.2 Idaho Guidance

DEQ Solid Waste Program Website:

<http://www.deq.idaho.gov/waste-mgmt-remediation/solid-waste/>

DEQ Hazardous Waste Program Website

<https://www.deq.idaho.gov/waste-mgmt-remediation/hazardous-waste/>

DEQ “Hazardous Waste Determinations” Fact Sheet, 2020

(See DEQ Hazardous Waste Program Website)

DEQ “Managing Sump Waste” Fact Sheet, 2020

(See DEQ Hazardous Waste Program Website)

DEQ Stormwater in Idaho Website:

www.deq.idaho.gov/water-quality/wastewater/stormwater

DEQ Septage and Septic System Website:

<https://www.deq.idaho.gov/water-quality/wastewater/septic-systems/septic-tank-pumping-and-septage-disposal/>

DEQ Ground Water in Idaho Webpage:

www.deq.idaho.gov/water-quality/ground-water

DEQ “FAQs: Management of Test Fluid from Underground Storage Tank Equipment”

<https://www.deq.idaho.gov/media/60180433/faqs-management-test-fluid-ust-equipment.pdf>

Idaho Department of Fish and Game (ESA):

<https://idfg.idaho.gov/species/>

Idaho Office of Species Conservation:

<https://species.idaho.gov/>

Memorandum of Understanding between DEQ and the Local Public Health Districts (2013):

<http://www.deq.idaho.gov/media/60177724/mou-deq-phds.pdf>

8.3 Federal Rules and Statutes

Solid Waste Disposal Act of 1965, 42 USCA §§6901 to 6992K.

<https://uscode.house.gov/view.xhtml?path=/prelim@title42/chapter82&edition=prelim>

40 CFR Part 136, Guidelines Establishing Test Procedures for the Analysis of Pollutants

https://www.ecfr.gov/cgi-bin/text-idx?tpl=/ecfrbrowse/Title40/40cfr136_main_02.tpl

40 CFR Part 257, Criteria for Classification of Solid Waste Disposal Facilities and Practices

https://www.ecfr.gov/cgi-bin/text-idx?tpl=/ecfrbrowse/Title40/40cfr257_main_02.tpl

40 CFR Part 258, Criteria for Municipal Solid Waste Landfills

https://www.ecfr.gov/cgi-bin/text-idx?tpl=/ecfrbrowse/Title40/40cfr258_main_02.tpl

8.4 Federal Guidance

Guide for Industrial Waste Management (EPA 2016):

<https://www.epa.gov/sites/production/files/2016-03/documents/industrial-waste-guide.pdf>

Industrial Waste Management Evaluation Model (IWEM):

<https://www.epa.gov/smm/industrial-waste-management-evaluation-model-version-31>

EPA, Principals of Design and Operation of Wastewater Treatment Pond Systems

<https://www.epa.gov/sites/production/files/2014-09/documents/lagoon-pond-treatment-2011.pdf>

EPA Method 9095B (“Paint Filter Test” 2004):

https://www.epa.gov/sites/production/files/2015-12/documents/9095b_0.pdf

EPA, PFAS Website

<https://www.epa.gov/pfas>

EPA’s NPDES Storm Water Program (Idaho permitting begins in 2021)

<https://www.epa.gov/npdes/npdes-stormwater-program>

FEMA Flood Map Service Center:

<https://msc.fema.gov/portal/home>

United States Fish and Wildlife Service (Idaho Office, ESA):

<https://www.fws.gov/idaho/promo.cfm?id=177175815>

USFW National Wetlands Inventory map

<https://www.fws.gov/wetlands/data/mapper.html>

US Army Corps of Engineers (Walla Walla Dist. Office, Wetlands)

<https://www.nww.usace.army.mil/Business-With-Us/Regulatory-Division/Wetlands/>

[USDA Natural Resources Conservation Service \(Idaho Office\)](#)

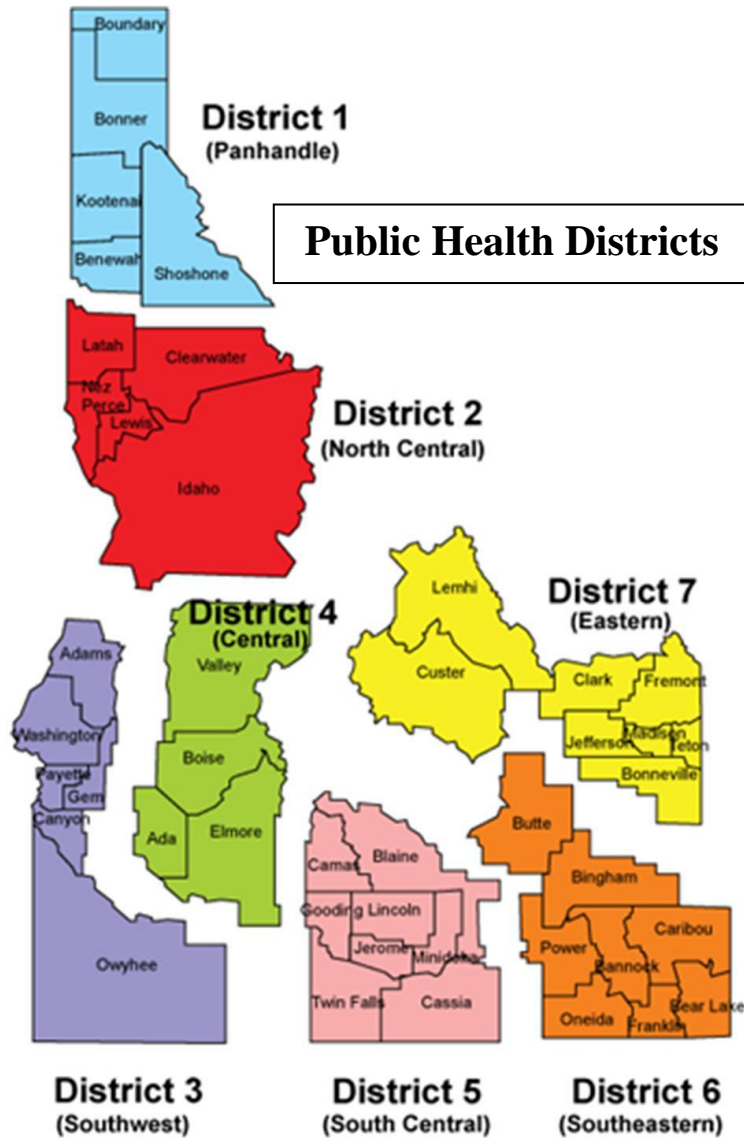
<https://www.nrcs.usda.gov/wps/portal/nrcs/site/id/home/>~~Add content~~

8.5 Other Guidance and Resources

“Ten State Standards” also called “Recommended Standards for Wastewater Facilities – 2014”
prepared by the Great Lakes – Upper Mississippi River Board of State and Provincial Public
Health and Environmental Managers:

<https://www.health.state.mn.us/communities/environment/water/docs/tenstates/wstewtrstnds2014secured.pdf>

Appendix A. Jurisdictional Maps of Health Districts, DEQ Regions, and Counties



Appendix B. NSWI Facility – Example Pumpable Waste Profile Form

The attached form is intended as an example of how facilities may address one aspect of pumpable waste acceptance. It is not intended to be inclusive of all necessary requirements, provide any legal advice or protections, or ensure regulatory compliance. Every facility must work with its own consultants and attorneys to develop a waste acceptance process to be included in the facility Operating Plan and submitted to DEQ and the District Health Department for review and approval.

Waste Profile ID: _____

Approval Date: _____

Expiration Date: _____

PUMPABLE WASTE PROFILE

In order for FACILITY to decide whether we can lawfully and safely accept your waste delivery, we must obtain the following information about your waste. Unless otherwise indicated on this form, this profile expires one year after approval. The form should be filled out completely by someone knowledgeable about the waste and the hazardous waste rules. The Generator makes a hazardous waste determination and is responsible for that waste from cradle to grave. All related analysis must be included with this form and if the process creating the waste changes or future analysis differs from what was submitted, a new analysis must be sent to FACILITY immediately. All information on this form must be typed or printed in ink – mark-outs are not allowed. See Instructions for more information.

I. Generator Information (NOT Consultant or Contractor)

Generator Name: _____

Address: _____

Contact: _____ Phone: _____ Fax: _____ Email: _____

Location of Waste Generation: _____

II. Has Waste Generator selected a Waste Transporter? [] YES [] NO

If yes: Name of Transporter _____

Address of Transporter _____

Contact for Transporter _____

Transporter Contact Information: telephone _____ email: _____

III. Waste Information

Common Name of Waste: _____

Detailed Description of Process Generating Waste. Attach schematic of unit process and/or flow sheet, if available: _____

Is This a Hazardous Waste as Defined by Federal, State or Local Laws or Regulations?

[] Yes [] No

VI. Physical Characteristics of Waste

Color: _____

Odor: [] None [] Mild [] Strong Describe

Physical State: [] Semi-Solid (sludge) [] Liquid [] Other _____

Percent Solids (if known): _____ % pH _____

Estimate fractional content of all materials present in the waste:

_____ % water _____ % soil _____ % organic matter _____ % trash
_____ % concrete _____ % metal _____ % plastics
_____ % other and describe _____

Are the waste characteristic provided above from lab analysis and inspection of the actual waste?
(Mark "No" if you relied on documented "typical" content or similar) ☐ YES ☐ NO

Has the waste come into contact with domestic septage or sewage wastes? ☐ YES ☐ NO
(Any potential for human pathogens)

Has the waste come into contact with fuel/petroleum products, or chemicals? ☐ YES ☐ NO

Describe: _____

Waste will be delivered to the site in: ☐ Bulk ☐ Drum ☐ Other _____

Anticipated Volume: ☐ Tons ☐ Yards ☐ Drums ☐ Gallons ☐ Other _____

Frequency: ☐ One-time ☐ Weekly ☐ Monthly ☐ Other _____

IV. Consultant or Contractor Information

Consultant/Contractor Name: _____

Address: _____

Contact Person: _____ Phone: _____ Fax: _____

Email: _____

V. Laboratory Information and/or "Process Knowledge"

Every shipment of pumpable waste must be accompanied by a waste determination. A waste determination is made either through analytical testing of the waste in a laboratory, knowledge of the process that created the waste, or a combination of both. FACILITY uses this information to ensure no hazardous waste is received and to properly categorize the waste for compatibility purposes.

A. Laboratory Analysis

Laboratory Name: _____

Contact: _____ Phone: _____ Fax: _____

Email: _____

How did you determine what constituents were to be included in the laboratory analysis?

Attach results and chain of custody documentation for all analyses performed on the subject waste within the previous 12 months. For minimum parameters to be reported see attached document "Waste Analysis Required"

And/Or

B. Process Knowledge. Reliance on process knowledge alone is most appropriate when there is a closed process and all process inputs are known to the generator, and the process is static and unchanging. To rely on process knowledge please attached document "Pumpable Waste – Process Knowledge Worksheet."

VI. Random Sampling

FACILITY performs random sampling and analysis for hazardous waste characteristics and constituents of wastes provisionally accepted at the site. If your waste is selected for random sampling, a sample will be collected at the time of receipt of the waste, the waste will be solidified with a solidification reagent, and the solidified waste will be temporarily stored at the site. If the results of random sampling and analysis indicate that the liquid was hazardous, the Generator shall be financially and legally responsible for retrieval, transport, and disposal of the pumpable waste/solidification reagent mixture at no cost to FACILITY. By execution of this document, the Generator agrees to indemnify FACILITY from, and agrees to defend FACILITY against, all liabilities associated with the handling of Generator's hazardous waste. In addition the Generator shall be responsible for all cleanup costs associated with contamination of FACILITY'S solidification facility as a result of delivery of hazardous waste to the facility.

VII. Certification

WHO IS RESPONSIBLE FOR PAYMENT FOR PAYMENT FOR SERVICES? _____

I hereby certify that I am the Generator, or I am authorized by the Generator to provide the information submitted in this form and any attached documents, including any Pumpable Waste Process Knowledge Worksheet, and to enter into this Agreement on the Generator's behalf. I have made a complete and thorough investigation of all matters relevant to completion of this form. This investigation included laboratory analysis, where applicable, on a representative sample of the waste. All required information concerning the waste, including the results of all laboratory analyses has been provided in this and the attached documents. I further hereby certify that such information is complete and accurate and that all known or suspected hazardous constituents/characteristics or safety hazards associated with the waste have been disclosed herein. I understand that the waste may be subject to random sampling and conditions described in Section VI of this form, that any waste that is non-conforming will be returned to me, and that FACILITY will not be responsible for expenses related to transportation, storage and handling of the non-conforming waste.

Name: _____
(Title) (Signature) (Date)

VIII. Waste Acceptance

The waste, as represented by information contained in this document, is provisionally accepted for disposal at FACILITY per Section VII. Waste Profile Identification Code: _____

Conditions of Acceptance (If Applicable): ☐ Require Waste Analysis every Load

(Signature of Authorized FACILITY Representative) (Date)

X. Waste Rejection

The waste, as represented by information contained in this document, is not accepted for disposal at FACILITY for the following reasons: _____

(Signature of Authorized FACILITY Representative) (Date)

PUMPABLE WASTE PROCESS KNOWLEDGE WORKSHEET

DATE: _____

WASTE GENERATOR (Business Name): _____

Pumpable Waste SOURCES and CHARACTERISTICS: Please circle appropriate responses below

| | | |
|---|-----|----|
| Restaurant Grease | YES | NO |
| Car and Truck Washing. (If yes, is it hand-wand or drive-through?) | | |
| Is the facility manned during operating hours and secured when closed? | YES | NO |
| Is there signage in the area warning that waste dumping is not accepted? | YES | NO |
| Vehicle Maintenance | | |
| Passenger/on-road Vehicles | YES | NO |
| Specialty Vehicles (industrial sector: _____) | YES | NO |
| Parking Lot Runoff | | |
| Passenger/on-road Lot | YES | NO |
| Specialty Vehicle Lot (industrial sector: _____) | YES | NO |
| Industrial Process | YES | NO |
| Irrigation Wet Well or Sump | YES | NO |
| Domestic Septage | YES | NO |
| Production Water from Oil & Gas Operations | YES | NO |
| Fuel Contaminated Pumpable Waste | YES | NO |
| Groundwater Remediation Pumpable Waste | YES | NO |
| Leachate from a Waste Disposal Site | YES | NO |
| Concrete Hydro-demo or Hydro-excavation Slurry | YES | NO |
| Wastewater from Cleanups or Emergencies | YES | NO |
| Mixed / Unsegregated Loads or Pumper Trucks Carrying Various Waste Types (contaminated) | YES | NO |
| Other as Described: | | |
| Known Chemical Additives in Sump (Provide description and MSDS) | YES | NO |
| Does the sump drain to a city sewer? See Note 1 | YES | NO |
| Does the sump drain to a storm sewer? See Note 1 | YES | NO |
| Does the sump drain to a vegetative area or containment basin? | YES | NO |
| Has the sump been previously tested? (See Note 2, attach results) | YES | NO |
| Other: | YES | NO |

NOTE #1 Provide name and contact for discharge to: _____

NOTE #2: Sump testing should reflect solid wastes accumulated in the sump and not the wastewater using toxic characteristic leaching procedures (TCLP).

INSTRUCTIONS for Completing Pumpable Waste Profile

- Item I: Provide Name, Address, and Contact Information for Pumpable Waste Generator, and location where the waste is generated.
- Item II: Provide Name, Address, and Contact Information for Waste Transporter, if known.
- Item III: Provide the common name of the waste type (e.g. "Grease Trap Waste") and the process that generates the waste. For simple processes this may be a very short description ("sump/trap that captures restaurant grease before it enters the city wastewater/sewer system"). For complex processes you will likely need to attach information and schematics, with the focus on what waste constituents are used in the process and how those might be changed or be found in the waste that is generated. The "process" may simply refer to an incident or activity: generated by truck spill cleanup, building demolition, or other activities. Finally, indicate whether the waste is "Hazardous Waste" by law. You may need to consult with an expert or refer to Federal or State guidance to answer this question. The FACILITY cannot take hazardous waste and you will be held financially liable for any hazardous waste that you deliver to the FACILITY knowingly or unknowingly. FACILITY may require a site inspection to better ascertain the unit process generating the wastes. Suspected hazardous wastes will require toxicity characteristic leaching procedure (TCLP) testing as directed by the FACILITY to confirm the wastes are not hazardous wastes.
- Item IV: Provide a physical description of wastes that may include estimated water content, viscosity, odor, pH, inorganic contents, organic contents, flash point, salts, metals, and other constituents. Describe fractional content of all wastes as estimated ranges: For example: Demolition wastes may be described as percent soil, percent concrete, percent vegetation, percent metal and percent trash that add up to 100%. Indicate whether the waste characteristics provided are "typical" or the result of laboratory analysis on the actual waste.
- Provide a response as to whether the wastes have come into contact with septage, sanitary sewer wastes, or other wastes that may be contaminated with or contain human pathogens?
- Describe any petroleum products or chemicals associated or contained in the waste. Provide material safety data sheets (MSDSs) for petroleum products and/or chemicals.
- i. If petroleum products are suspected, total petroleum hydrocarbon testing will be required. Other organic tests may be required, pending petroleum hydrocarbon released, such as benzene, ethyl benzene, toluene, and xylene (BTEX) for gas spills. FACILITY may accept petroleum hydrocarbon contaminated wastes if total petroleum hydrocarbon concentrations are less than 25,000 mg/kg.
 - ii. If caustic or acidic chemicals are used in the unit process, testing for the eight Resource Conservation and Recovery Act (RCRA) heavy metals may be required as determined by FACILITY staff. Data collected from similar sites may be considered with follow-up site specific data to confirm non-hazardous waste conditions.
- Item V: Provide Name, Address, and Contact Information for Contractor/Consultant, if known.
- Item VI: Laboratories must use EPA-approved testing methodology. For example, regulatory accepted analytical protocols for analyzing total petroleum hydrocarbons (TPH) may include: EPA Method 418.1, Diesel Range Organics (DRO) option under USEPA Method 8015B, Oregon DEQ Northwest Total Petroleum Hydrocarbon Methods for diesel and gasoline (NWTPH-DX & NWTPH-GX), EPA Method 1664 A if TPH contaminated wastewater or other regulatory approved TPH testing methods as reported in the *State Summary of Soil and Groundwater Cleanup Standards for Hydrocarbons* published by the EPA Office of Underground Storage Tanks. FACILITY reserves the right to require other test methods or additional testing. Indicate how the list of analytes was arrived at (reference to process). Analytical results must reflect the media being disposed of.

Acceptance of waste determinations based on process knowledge are at the discretion of the FACILITY. Fill out the Pumpable Waste – Process Knowledge Worksheet for consideration.